

HOME NEWS

Bishop says Princess in need of compassion

The Bishop of Truro, Dr Graham Leonard, who was involved in controversy over his comments last weekend about Princess Margaret's relationship with Mr. Roderick Llewellyn, called yesterday for "compassion and understanding" for the Princess.

The bishop issued a statement through the Church Information Office emphasizing that his remarks were not made in a speech but in reply to press questions put to him as chairman of the Church of England Board for Social Responsibility. He said:

"I was asked as chairman of the board... to comment on statements made by MPs and others and judged that it would have been responsible to decline to comment. I made no speech and made no reference to a speech in my statement."

I wish to reaffirm two points I made which are being overlooked: namely, that our reaction should be one of compassion and understanding for the Princess as she faces her personal problem; and secondly, that this should be reflected in the kind of way we speak about the situation. Some language has been used which should not be used about anyone, whoever they may be. I wish to repeat what I said yesterday in reply to further questions: "There is a particular need for understanding in this situation because the monarchy cannot answer back. I hope it will not be thought of as patronizing if I say that the one thing I am doing at the present moment is to pray for Princess Margaret that she should be given the strength to make the right judgment. I do not wish to make any further comment."

The bishop's statement is intended to end an episode that the Archbishop of Canterbury, Dr Donald Coggan, has found acutely embarrassing.

The Church of England's policy has appeared to be not to comment on Princess Margaret's difficulties. It is thought in church circles that the bishop was unwise in replying to questions put on the telephone by a Sunday newspaper journalist.

Clinics are failing drug addicts, report says

By a Staff Reporter

Drug addicts are not attending treatment centres because the clinics have failed to adapt to new drugs on the market and to a new breed of drug abuser, according to a report published yesterday by the Helping Hand Organisation, which runs the Hungerford Centre in central London.

It says that as a consequence most of the people taking drugs in London are receiving only voluntary help for their addiction.

For two years the centre has been running an advice, information and counselling service for the great London area. But the permanent staff of three have also been mixing with drug users in the West End, especially at Piccadilly Circus, where as many as 120 are said to congregate in any one hour.

Mr John Whittle, senior social worker at the centre, says that the treatment clinics are on the whole oriented towards heroin and methadone addiction. But the high and rising price of those drugs—three days' supply of heroin can cost an addict up to £120—has led to "a new breed of drug abuser" using barbiturates, ritual or amphetamines. Three days' supply of diazepam, for example, will cost only £10 or £15 on the open market.

The report also expresses concern about therapeutic addiction. "The classic syndrome," Mr Whittle says, "is a woman aged between 40 and 50 whose children have left home and who suddenly realizes that there is a gap in her life."

Such people can become addicted to pain-killing drugs supplied by hard-pressed family doctors over as short a period as three months.

The centre has dealt with some 35 such cases over two years and sees them as only the tip of the iceberg. "Few people are happy to leave a doctor without a prescription; a lot of doctors are hard pressed and it is relatively easy to prescribe drugs."

Drugs, Suburbs and Subways: The Pattern of Addiction in the Seventies (Helping Hand Organisation, 8 Strutton Ground, London SW1P 2HP: 30p).

Captain Phillips on car summons

Captain Mark Phillips, aged 29, Princess Anne's husband, has been accused of speeding in Whitehall on February 23 and is to appear at Bow Street Magistrates' Court on Monday.

Captain Phillips, who left the Army recently, is training at his 1,200-acre Gloucestershire home, Gatcombe Park, for the Badminton Horse Trials next week.

Firearms recovered

Police raided a house at Ipswich, Suffolk, yesterday and recovered firearms and ammunition stolen from Ipswich Sea Cadet headquarters.

Welsh union born out of frustration

Members of the finance and organization committee of the Farmers' Union of Wales recently dispensed with their usual cup of tea and drank champagne instead to celebrate a remarkable landmark in their history. After 25 years of representation and struggle they had been told that the Government fully recognizes the union as a negotiating body for its members.

The union was born out of anger and frustration, founded by farmers who felt that officials of the National Farmers Union and its policymakers in London had little sympathy with the difficulties of its members in the Principality.

It was perhaps an inevitable development, for the essential interests of the farming community in Wales are different from those of their Welsh colleagues. According to the FFW's journal, "they came from flat, rich land which swept as far as the eye could see."

Little wonder that the hill farmer in Wales in his struggle to make his dairy, rocky land viable felt little empathy towards the landowner of Cheshire and his rich pastures.

The resentment of the founding fathers of the FFW was fuelled by the realization that most of the Government's aid went to the large pro-



Elaine Paige, aged 26, who has been chosen from nearly a thousand applicants to play the role of Eva Perón in the new musical, Evita, which opens at the Prince Edward Theatre, London, in June.

TUC wants more for health

The TUC General Council wants an urgent meeting with the Prime Minister to ask for more money for the National Health Service.

Capital spending on the service in real terms is only two thirds of what it was in the early 1970s and family practitioner services are coming under increasing strain, the TUC said in a statement yesterday.

The general council has called for an extra £150m for the NHS and personal social services in 1978-79. The statement said the money is needed to bring into service new hospitals whose opening has been delayed because of cash limits.

The TUC believes the Government's intention to increase expenditure on the National Health Service by 1.8 per cent up to 1982 is insufficient.

Disabled people get sailing facilities in Lake District

From John Chartres

Special facilities to enable disabled people to handle small sailing boats and canoes on Easewhite lake, Cumbria, were unveiled at the weekend.

A converted and restored boathouse, two sailing craft and a fleet of canoes were handed over to the Calvert Trust by Mr Peter Naylor, chairman of Cumbria County Council, on behalf of the Provincial Insurance Company, of Kendal, who have provided the £5,000 needed.

The boathouse is located alongside the tiny open-air theatre on the spot where Tennyson wrote "Mort d'Arthur" and is designed so that even people paralysed from the waist down can move from their wheelchairs into the boats.

Scargill call for 'compassionate' damages system

A call for a new "compassionate" compensation system for people killed or injured in industry came yesterday from Mr Arthur Scargill, president of the Yorkshire area of the National Union of Mineworkers.

Mr Scargill, who is also compensation agent for Yorkshire NUM, told the resumed annual meeting of the area council: "When you go into a court of law, it is like a lottery or a bingo session. There were often wide discrepancies and anomalies."

On the Pearson commission recommendations arising from its five-year study of civil liability and compensation, Mr Scargill said it had been hoped it would recommend an all-embracing "no-fault liability" system, including industrial cases, to replace the present common law damages claims.

He suggested such a system and several important changes, including payment for death that reflected the sense of loss to a family. Sums under £10,000 were an insult, he said.

Also, there should be weekly benefits for a dead worker's dependants or for people disabled and unable to work, equal to the average wage in the industry concerned.

Channel tunnel idea part of BR's forward planning

British Rail said yesterday that it was reviewing proposals to cope with future growth of cross-channel traffic, including the idea of a Channel tunnel.

But it denied a report in The Times yesterday that it was planning to submit proposals for a Channel tunnel to the Government this year. However, it has been planning alternative tunnel schemes to put forward.

When the Government decides to resurrect the project, "The growth of cross-Channel traffic means that we must constantly update our plans. A tunnel is one idea. Specialized ferries, hovercraft and jetties are others," British Rail said.

The scheme now being considered would be for a single-track tunnel, compared with the three-track one abandoned in the economic crisis of 1974. It would be able to handle up to 120 trains a day.

"We are assessing this so that should the tunnel issue be raised by the Government we shall have all the facts ready," British Rail added. It maintains regular contacts with French Railways and they are working together on the single-track tunnel plan.

Regional report

Tim Jones

Cardiff

ducers and not to those who worked the difficult under-productive land.

FUW members argue that the NFU has only itself to blame for the establishment of the breakaway union in the Principality. "They treated us like second-class citizens, and in the end we kicked back," one member said.

A student of the FUW's early history is left with the clear impression that if the policy-makers at Agriculture House had been more sensitive to the needs of the Welsh farmers the union would not be the force it is today.

In those early days just before the break attempts to get NFU leaders to go to Wales to explain their policies were seldom successful, and a request to hold a conference to discuss Welsh troubles was rejected.

When the NFU increased its subscription rates the 30-acre farmer was asked to pay the

same increase as the man who owned 2,000 acres and more.

An overriding complaint against Agriculture House was that Wales had no representatives on the price review team and had fewer delegates on the marketing boards than the other home countries.

Eventually Welsh delegates began to regard their visits to London for committee meetings as a waste of time, and the die was cast for a breakaway body to be formed.

The final break came, fittingly enough amid uproar and confusion, when Mr Ivor T. Davies and Mr D. T. Lewis complained to an NFU meeting in Carmarthen of their abortive visits to London.

There was only one answer, they said, and that was to set up an independent union for the farmers of Wales; now it has a network of county offices and a full-time staff of 65.

The differences that led to the formation of the FUW are not new because evidence has emerged of an attempt in 1918 to establish a similar body called the National Farmers' Union of Wales. Although that collapsed four years later, its claims are a clear indication that the difficulties that beset Welsh farmers today loomed equally large in those days.

In brief

Detention for supporter

A Liverpool football supporter, Anthony David Dunne, aged 17, was sentenced by Birmingham magistrates yesterday to three months' detention after an incident after the Aston Villa and Liverpool game at Villa Park on Saturday.

Four other supporters were fined the £100 maximum, one was given a three-month suspended sentence, one was sent to the Crown Court for sentence and one was remanded for sentence.

Switch in power payments

Tenants of three blocks of council flats at Ventnor and Wroxall, Isle of Wight, are to be allowed to settle their electricity bills instead of paying the same proportion of the total, irrespective of the amount used.

The anomaly has continued for some years, even though the flats are individually metered.

Cruelty to old people alleged

An investigation was ordered yesterday into alleged cruelty at an old people's home in Watling Street Road, Preston, Lancashire.

An anonymous complaint had been made, apparently by a member of staff, against two care assistants at the home. Social Service officials said a full report would be made later.

Getting the hump

Speed control humps are to be constructed in College Street, Winchester, which passes the house where Jane Austen died and the entrance to Winchester College.

Fisherman rescued

Shoreham lifeboat rescued Mr Robert Virgo, a fisherman, of Kings Walk, Shoreham, Sussex, after he had spent nearly two hours in the water early yesterday.

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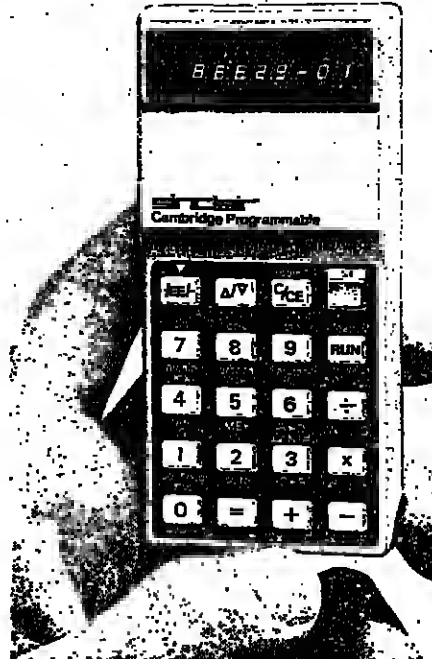
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Weakness in communication key factor in death from battering of baby at risk, inquiry finds

By John Roper

Health Services Correspondent

An unfortunate combination of weaknesses in communication between health authorities was a key factor in the death from battering of a child known to be at risk, the report of an inquiry said yesterday.

Too many dangerous assumptions were made and there was urgent need for a commonly agreed definition because terms such as "urgency", "risk of non-accidental injury" and "at risk" might be interpreted differently in establishing priorities, it is stated.

The inquiry, set up by four health authorities, was into the death of Simon Peacock, aged seven months, who died in the night of November 1977.

He said that something had obviously gone wrong with the system of social care. The manslaughter was a crime, that makes the blood run cold.

The boy died from a fractured skull, ruptured liver and fractured ribs sustained immediately before death.

The post-mortem examination found older injuries, one in the rib which was three or four weeks old, and extensive old areas of scarring of the chest and thigh scalding, and healed burns, probably several weeks old, on the soles of his feet.

The inquiry team, which interviewed 36 witnesses in private, apportioned no blame to individuals. Its terms of reference were to inquire into services and communications and it undertook not to name individuals.

The report states that health authorities knew about possible difficulties before the boy's birth. His mother had been admitted to hospital with an

aspirin overdose shortly before she became pregnant, and when she was admitted to a maternity unit the staff noticed fresh bruising, for which she could offer no explanation.

A place of safety order was made out for the boy but it was allowed to lapse. A social worker learnt only by chance that the mother and baby had been discharged from hospital. In subsequent visits to the home the health visitor and other professional people never saw the boy unclad and were therefore unable to detect injury.

Faults in the system sprang not only from differences in terminology but in the transferring of records between authorities.

For example, health visiting records held by the Suffolk authority were retained until they were officially requested by another authority. But when the Peacocks moved to Cambridgeshire the health visitor received only a telephone call from her opposite number, who was concerned about the case. No detailed documents were sent.

Staffing in the Cambridgeshire social services department, which took responsibility for the Peacocks, was low, but the case would have been handled urgently if it had been seen to be necessary. Although there were members of the Peacock family living within half a mile of the family's new home, no complaint was made by them or by a neighbour about the boy.

The report says that the boy should have been put in a higher risk category when he was moved from Suffolk to Cambridgeshire. In Suffolk there were three definitions of baby battering: definite, suspected and vague suspicion.

The boy was put in the suspected category. When the case was passed on, that "alert" failed to sound as effective as it might have done. It therefore might be desirable to review the method of dividing the register of non-accidental injuries.

Mrs Roberta Cannon, a member of the Cambridgeshire area health authority, said yesterday that the recommendations of the inquiry were accepted but resources were limited and whatever was done some babies would be battered to death. She supported the report's conclusion that a working party should be set up to consider the report in a national context.

Mr Dennis Hughes, Director of Social Services for Suffolk, said: "No matter how good the social workers are, at the end of the day there will still be parents who will kill their child."

Mr Alan Jones, Director of Social Services for Cambridgeshire, said: "Parents will still kill their children. I do not think of any of the authorities can prevent this."

All the representatives said they accepted the report and any blame it implied for the various authorities.

Mr Peter Cooke, administrator of Suffolk Area Health Authority said the lessons would be looked at carefully, but those lessons must be seen to be for the whole country.

Mr Jones said the Simon Peacock case was important "but not one of the highest urgency."

The family was moving into an area where there was going to be extended family support and new housing. "It shows how difficult it is to assess the degree of risk in cases like this."

Anglo-Gallic lessons on catastrophes

By Peter Hennessy

The wreck of the Amoco Cadiz off the coast of Brittany has given new impetus to contingency planning in Whitehall for the handling of maritime emergencies.

In the next few weeks officials of the British and French Governments will meet to draw lessons from the disaster. They will be incorporated into the final draft of the Arab-French Mancheplan, for cooperation in the event of catastrophes in the Channel.

An early, incomplete version of the plan was ready for use the moment news reached London and Cherbourg that the Amoco Cadiz had run aground. The emergency control room set up by the Department of Trade in Sunley House, eight floors above High Holborn in central London, had two years' preparatory work on Mancheplan to draw on in advising ministers, effecting the disposition of the British fleet of dispersal vessels and conducting "pollution diplomacy" with its French counterpart.

Mr Stephen Burbridge, the assistant secretary in charge of branch one of the department's marine division, which supervised the operation, and the coastguard who assisted him in a two-man 24-hour watch, found the plan a great help in coordinating action with the French to contain and disperse the world's largest oil slick.

Britain's state of readiness for such an emergency has been



The area covered by Mancheplan, showing anti-pollution resources available.

transformed since the Torrey Canyon disaster in 1967, when the Government found itself without any oil pollution contingency plans to set alongside the traditional search-and-rescue operation.

The spectre of the Torrey Canyon has haunted Whitehall for 10 years. Domestic and international task forces and bureaucracies have sprung up in the meantime in an attempt to lay it. In 1969 states bordering the North Sea concluded the Bonn agreement providing for mutual assistance in the case of severe oil spillages. Britain drew up nine district plans to cope with oil emergencies off her own coasts.

The Warren Spring Laboratory of the Department of the Environment set to work to improve dispersants. The oops sprayed out of British tugs off Brittany were a thousand times less toxic than those used on the Torrey Canyon's cargo. An experimental vessel sailed to the area to test the feasibility of sucking oil out of the sea into containers.

Whitehall's support organization is well primed these days. The Department of Trade has a pollution disaster fund, approved by Parliament each year as a subheading of the shipping vote. Operations of the Amoco Cadiz type are expensive. The hire of a tug may cost £1,500 a day, dispersant costs £2 a gallon. But Mr Burbridge can fight his battles with the insurance companies in an

attempt to recoup his costs after the emergency is over. In the meantime he is free to spend what he has to.

He chairs a steering committee on pollution at sea which brings together representatives of industry, government departments and nature conservancy interests. He can call upon the services of the Central Unit on Environmental Pollution at the Department of the Environment.

During the Amoco Cadiz emergency the Clearance Advisory Panel met to determine which areas of natural interest and which fishing grounds should, as far as possible, be spared the contamination of dispersant.

On top of all that, Mr Burbridge reports to Whitehall's senior body concerned with disasters, the Civil Contingencies Unit in the Cabinet Office, under Sir Clive Rose, which spends its time worrying about the worst happening everywhere.

Mancheplan is a pioneering study designed to take contingency planning a step further on the international scale. Its drafting began two years ago by the Anglo-French Accidents Technical Group. Britain is represented by the Department of Trade and the Ministry of Defence; France by the Préfecture Maritime, which has its headquarters in Cherbourg.

The plan has two annexes entitled "Joint action in foreseeable disasters", now being

drafted by the French. They envisage a graded catalogue of disasters ranging from search-and-rescue operations for a yacht in distress in the Channel to the most feared disaster of all: the collision of a chemical tanker and a crowded passenger ferry in the most congested waterway in the world, the Strait of Dover.

Other especially important annexes spell out the procedures for high level government intervention when necessary, the control of air space during emergency operations and the maintenance of communications. The main body of the document is divided into three sections: general principles; search and rescue; pollution and protection of the environment.

A communications exercise was held in the Strait of Dover last June. The final version of Mancheplan was due for publication this month, with another exercise planned for May. The schedule will now be altered to allow for the experience of Amoco Cadiz to be incorporated in the final draft.

The Department of Trade is hoping to conclude similar agreements to Mancheplan with other North Sea states. A joint draft is in preparation with the Norwegian Government; initial talks were held with the Irish Government in December. Bilateral agreements will also be sought with Belgium and The Netherlands.

French rules ignored, page 7

Retarded children 'forgotten patients'

By Our Health Services Correspondent

Shocking details of a deprivation of severely retarded children living in hospitals, the mentally handicapped, published today by a House of Commons select committee, observing what happened to eight long-stay hospitals.

The report, by Miss Mary Oswin, an expert in the field, suggests that the "children some of whom are now near the top of the forgotten pile of the National Health Service" Doctors appear to lose interest and nurses become bored because of a feeling of helplessness.

Samples of the scene in ward with 21 severely handicapped children aged three to 14 years include:

4.35 pm. "Super started. She ate clear blue lolly and refused. Dirty bits lying in the heap in the broken door side. More able children gathered round from less able... some took bowls on trolley and ate at slings mess of everest of leavings... then went to eat eaters and tried to take 1.9.50 am to 6.30 pm. Miss aged 11, non-ambulant and speechless... sitting in a wheelchair... only once a day... mapp changed... a sign of receiving attention when being fed or changed... typical of many."

The report says that in such cases medical consultants easily accept that handicapped children are beyond help.

Other points in the report are: from other professionals either sparse because they too few or additionally therapist took little interest in the children in special care... they appeared to have turned blind eyes to the fact that they were suffering by the children. Only three of the hospitals sufficient, wheelchair, face about, lack of respect, no home for her father to help.

Miss Oswin, among a number of recommendations, says there should be a co-ordination of services for handicapped children who might be a teacher, social worker, or parent.

The study was financed by the Spina Society under the direction of Professor Jack Tizard of the Institute of Child Health, University of London. It was a joint project with the Medical Publications in London with William H. Medical Books Ltd, Ex.

Prince to appear in TV film

The Prince of Wales, appear in a BBC Television film about the nationwide film about projects based in north London. He will say how he wants £12m raised by the Silver Jubilee Fund to be and how part of the money so far has been spent.

The Prince will be on screen for 15 minutes. The programme will be shown at 10 on April 24.

£5m grants urged for provincial theatres

By Our Theatre Reporter

The Arts Council is to ask the Government to provide grants totalling possibly £5m to renovate nine of Britain's big provincial theatres. In recent months the council has mounted a rescue operation for a number of provincial theatres that have been threatened with closure by commercial management.

Working with local authorities and other local groups, the council believes it has a network of six "national" theatres which can be developed to take productions from all leading drama, ballet and opera companies.

However, each of the theatres, the Birmingham Hippodrome, Liverpool Empire, Manchester Palace, Bristol Hippodrome, Southampton Gaumont and Sunderland Empire, will need £1m to £1.5m spent to make it adequate for performers and audiences.

Much money will have to come from local sources, but the council is preparing its case to the Government for much of the cost.

Mr Jack Phipps, the council's director of touring, was optimistic yesterday that substantial support would be forthcoming from the Government. He pointed out that it was a national need, and that it was

politically desirable to provide the facilities for London-based national companies to tour the provinces.

As well as the six large theatres, the council will be seeking help to renovate three smaller theatres: the King's Theatre, Southsea (at a cost of perhaps £350,000), Gaumont, Ipswich (a maximum of £1m), and ABC, Peterborough (about £200,000).

Another Arts Council plan to improve touring is being discussed on Thursday when representatives of 19 provincial theatres meet in London to discuss a scheme for mounting productions of musicals to go on tour.

Solicitor and a clerk jailed over dollar premium plot

A solicitor and a solicitor's clerk from different offices were jailed at the Central Criminal Court yesterday for their part in a plot to defraud the Bank of England of more than £1m in dollar premium rebates.

Patrick Walsh, aged 35, solicitor, of 10, Cherry Tree Avenue, Chingford, London, was jailed for four years and three months and Brian Turner Wooding, aged 62, a solicitor, of Petworth Road, Milford, Surrey, described as "the con man's fool", was sentenced to three years and three months and a fine of £300,000, which he is serving for another offence.

Judge Buzzard said "You were not the instigators, nor did you stand to gain the major part of the proceeds."

Mr David Tudor Price, for the

prosecution, said that in March, 1976, information reached the Treasury that "certain persons were planning to carry out a substantial fraud by using the dollar premium system", and that a member of the staff at the Bank of England was involved.

Treasury investigators kept watch and saw the Bank official go to the Waldorf Hotel, where he had a two-hour conspiratorial meeting with Mr Walsh.

Both Mr Wooding and Mr Walsh pleaded guilty to plotting with others dishonestly to obtain money from authorized dealers in investment currency by falsely pretending they had investment currency for sale which would attract the dollar premium. Mr Wooding also admitted forging two letters and Mr Walsh admitted forging one letter.

V & A bid to save Canaletto

By Our Arts Reporter

The largest amount ever made available from the Victoria and Albert Museum's regional purchase fund, £137,500, has been offered in an effort to save two Canaletto paintings from export. Both are of Warwick Castle and come from the castle's collection.

The offer was announced in a Commons written reply yesterday by Mr Gordon Oakes, Minister of State, Department of Education and Science. Two museums, Birmingham and the Ashmolean, have expressed an interest in the paintings, for which export licences were withheld for six months last November.

The amount offered by the V & A represents half the purchase price of one of the paintings.

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Craft apprenticeship training at school urged

By Diana Geddes

Education Correspondent

Proposals to allow pupils to start training for craft apprenticeships while still at school are put forward in a report by the Engineering Industry Training Board published yesterday.

Under the proposals, which are part of a wider plan for the fundamental reform of the training of craftsmen, pupils who reached a satisfactory standard in vocational slanted courses in mathematics, applied science, technology and craft practice during their final two years of compulsory schooling would be exempted from the first six months of their craft apprenticeship training.

The board says that a grade two or three in a CSE examination based on appropriately

designed courses would be considered satisfactory. On leaving school the boy or girl would then spend a year in further full-time training, and at least one further year practising craft on the job.

Under the proposals the trainee would be able to reach the standard required for the certificate of craftsmanship and receive the full rate of pay appropriate for the craft by the age of 18 instead of the present age of 20.

At present a minimum of three or four years' training is required before the craft certificate is awarded. The board believes that many able young people are put off engineering because of the long period of training and low pay during that time.

Mrs Shirley Williams, Secretary of State for Education and Science, has given the proposed school-based training a warm welcome.

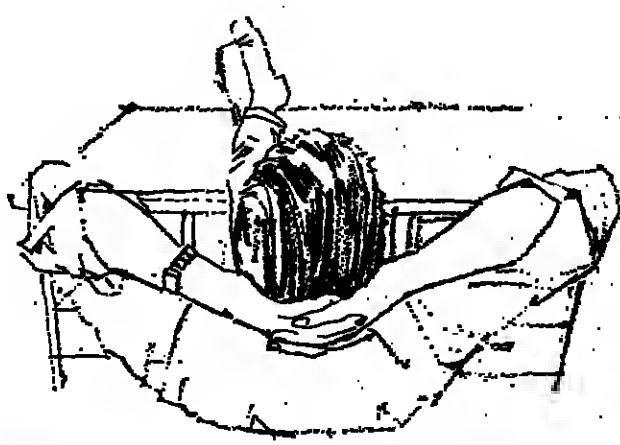
Speaking at the annual conference of the National Association of Schoolmasters/Union of Women Teachers in Harrogate last week, she said it could provide the additional motivation required by some fourth and fifth-year pupils who might be bright academically but were wasting their own and their teachers' time, because they could not see the relevance of what they were learning.

Mrs Williams said later that if agreement could be reached between the employers and the engineering unions, and if the reaction of the teachers' associations to the injection of a

greater vocational element into the school curriculum was favourable, she hoped it might be possible to introduce the scheme within the next year or so.

Mr Hugh Scanlon, President of the Amalgamated Union of Engineering Workers, said the scheme would be a "very good thing" and that he would be happy to comment on his union's reaction to the proposal until the meeting of its executive committee in May, when the whole of the craft apprenticeship training plan would be debated.

Removal of Craft Apprenticeship Training Board, 54 Chancery Lane, Watford, WD1 1LB.



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WEST EUROPE

M Chaban-Delmas beats official Gaullist candidate to presidency of National Assembly

From Charles Hargrove
Paris, April 3

M. Jacques Chaban-Delmas, the Mayor of Bordeaux and one of the historic Gaullist leaders, was tonight elected president of the National Assembly, against the outgoing president, M. Edgar Faure, who stood as the official candidate of the Gaullist Rassemblement.

To limit the damage to the party's unity, placed under severe strain by this double candidature, M. Edgar Faure withdrew his candidature after the first inconclusive ballot. The Communist and Socialist candidates never had a serious chance.

Normally devoted to routine business, with the election of the president usually settled by the majority parties beforehand, the opening of the Assembly's first session took place in an atmosphere of intrigue and high drama.

This arose from the determination of M. Chaban-Delmas, one of the Gaullist "barons", a former Prime Minister, and unsuccessful contender for the presidency of the Republic in 1974, to challenge the candidature of M. Faure, the official Gaullist candidate, ignoring appeals to preserve Gaullist unity.

Much to everyone's surprise in the first secret ballot M. Chaban-Delmas secured a comfortable lead of 17 votes. He obviously secured a substantial number of votes from the non-Gaullist UDF, the Gaullist alliance and also some Gaullist support.

M. Marcel Dassault, the 86-year-old aircraft designer and industrial magnate, achieved his life-long ambition today of presiding over the opening session as the oldest member.

The Socialists and Left Radicals caused one of the first incidents of the day by remaining outside the Chamber during his inaugural speech.

He told the packed Chamber that he would speak about unemployment, which he blamed on the fact that "industrialists have lost the taste for enterprise. Are we going to go on for a long time yet importing 80 per cent of our machine tools from the United States?" he asked.

French industrialists had not the means to invest and build new plants. He suggested as a solution a tax on wealth, and proposed the staging of a great universal exhibition in 1980.

The new National Assembly is very different in character and composition from its predecessor, elected under President Mitterrand in 1973. It can be described as the first Giscardian assembly.

The Gaullists are still the largest single party, but they lost the Premiership in 1976, when M. Raymond Barre succeeded M. Chirac and, since the last election, they no longer dominate the government majority.

The alliance of non-Gaullist parties, the UDF, is numerically the largest. The old left-right or majority opposition cleavage has given way to a more complicated pattern, in which both sides are divided into groups of about equal strength, now that the Union of the Left, at least as it existed from 1972, is a thing of the past.

Quite apart from the strength of his own supporters, this provides President Giscard d'Estaing with far more opportunity for parliamentary manoeuvres than before and is just what the Gaullists are concerned about.

This underlay today's skirmish over the presidency of the Assembly and was yet another chapter—with M. Edgar Faure and M. Chaban-Delmas acting as stand-ins—in the long-standing feud between the President of the Republic and the president of the Gaullist Rassemblement.

The involved backstage manoeuvres throughout last week, and the feverish first-night atmosphere in the packed lobby of the Assembly today, justified the Gaullists' foreboding of a slow relapse into the ways of the Fourth Republic.

The new Assembly includes an unprecedentedly large number of new, and younger faces, and 184 members made their parliamentary debut today. The average age is distinctly lower. The youngest member is 27, three others are under 30, and many are under 40.

On the left, the renewal is greater than on the right, and greatest of all in the Socialist Party. There are also 17 women members, compared with seven in the previous House.

France's new sea safety rules ignored by ships

From Ian Murray
Paris, April 3

New regulations introduced by France last week to prevent another tanker wreck like that of the Amoco Cadiz are being widely ignored. Since the regulations came into force, 13 out of 97 ships are reported to have broken the new rules and more than 30 others failed to identify themselves on request.

The regulations require all tankers entering the "corridor" to the west of Ushant, to notify their presence to the French authorities. If anything goes wrong this also to be notified to the authorities. The ships have to keep to the corridor's outer edge, some seven miles offshore.

To regulate this traffic, the French have set up a 24-hour radar watch on the two stations on Ushant, increasing their staff from nine to 25. This enables them to keep a watch over a 20-mile stretch off Ushant from Pointe Saint-Mathieu to Aber Wrach.

In the first few days the new regulations appeared to be meticulously observed, but since last Thursday this has no more been the case. The radar stations try to call the ships which appear on anonymous blips on their screens, but with no success. They steer a course closer to the shore than they are allowed and refuse to answer the signals.

The problem is to be discussed with M. Raymond Barre, the Prime Minister, by M. Marc Bécam, who is responsible for coordinating the Amoco Cadiz clean-up. Among measures being considered is the arrest of a supertanker on the high sea by the Navy, and holding it for several days at Brest.

A Navy trawler has now been posted off Ushant to intercept ships breaking the new regulations. The cleaning of the beaches is going ahead quickly now that all the oil has been released from the wreck.

Britain not yielding at resumed fish talks

From Michael Hornsby
Luxembourg, April 3

Negotiations between EEC member states on a new common fisheries policy are to be resumed on April 24 in Luxembourg, it was agreed here today. They were broken off in deadlock two months ago with Britain rejecting as inadequate a compromise accepted by the rest of the Community.

Speaking to journalists after a meeting here of EEC agricultural ministers, Mr. John Silkin, the British minister, was at pains to emphasise that the resumption of the long-running negotiations should not be taken to imply any weakening of the British position.

Britain's main demands, Mr. Silkin said, remained exclusive rights for British fishermen up to 12 miles from the shore, a "dominant" preference in their share of the catch between 12 and 50 miles, full and satisfactory conservation measures, and a "proper share" of any future growth in fish stocks.

Earlier at the ministerial meeting, Mr. Silkin, backed by his Irish colleague, Mr. Brian Leohane, refused to consent to the ratification of agreements on reciprocal fishing rights with Norway, Sweden and the Faroes. As a result, the existing interim arrangements with these countries will be extended until the end of April.

Mr. Silkin said that before ratifying the agreements he wanted to know how the catch allocated to the EEC in the waters of the three countries would be shared out between Community fishermen. Nor could he accept that outsiders should be allocated shares of EEC fish stocks before the Nine had decided how to distribute these among themselves.

To private talks with Mr. Finn Olav Gundelach, the EEC Commissioner for Fisheries, Mr. Silkin said that the 31 per cent share of the EEC fish catch offered to British fishermen by the Commission was a "basis for negotiation". But he made it clear that Britain wanted more of certain species. (Britain's original demand was for a share amounting to about 45 per cent of the total catch.)

Mr. Silkin also emphasised that it was impossible to judge the fairness of the proposed catch share-out in isolation from other elements in an overall fisheries policy. He indicated that Britain would take a more flexible view if it had an assurance that its fishermen would get a preferential share of any growth in fish stocks brought about by conservation.

The conservation measures proposed by the rest of the EEC, Mr. Silkin contended, would do little more than maintain stocks at their existing level. Tougher measures that allowed fish stocks to grow significantly would obviously make it easier for Britain to accept a smaller share of the total.

Mr. Silkin was adamant that the traditional rights which French, Dutch and German fishermen have enjoyed within 12 miles of the British coastline would have to be phased out, though he did not specify over how long a period. Hitherto this demand has been fiercely resisted by the French, who would be the most seriously affected.

Spending on agriculture: A "fundamental look" at the EEC's "open-ended expenditure" on the agricultural sector was called for today by Mr. Denzil Davies, Minister of State at the Treasury, who was representing Britain at a joint meeting here of EEC foreign and budget ministers.

Agriculture accounted for more than 70 per cent of EEC budgetary expenditure, Mr. Davies said. Last year output of milk products was 14 per cent in excess of requirements and only 40 per cent of butter production could be absorbed by the market. This was a direct result of guaranteeing farmers too high prices.

Britain welcomed the opportunity to discuss budgetary priorities for the coming year, but such discussions could not realistically exclude the main area of Community expenditure.

New cars displayed for sale must now carry labels showing the official fuel consumption figures

Until now it's been very difficult to compare the fuel consumption figures claimed by manufacturers, because they may have tested their cars in different ways.

Now, new cars have to undergo the same Government approved test. So for the first time the figures will be truly comparable.

Dealers must ensure that new cars displayed for sale carry a label showing the Government's official fuel consumption figures for that model. Look for the label if you're thinking of buying a new car.

Fuel consumption may be only one of the things you consider when buying a new car. But today, with petrol costs as high as they are, it's just as well for you to know the facts.

Your local dealer must have details of the officially approved fuel consumption test results available in his showroom for you to consult on request.

Or, you'll find the complete list of figures in the following motoring magazines:

Motor (April 8th issue)
Autocar (April 8th issue)
Practical Motorist (May issue)
What Car? (April issue)
Drive (May/June issue)

If you prefer, you can write to the following address for a complete list:

Car Fuel List, P.O. Box 702, London SW20 8SZ.

(Not applicable to Channel Islands or Isle of Man)
DEPARTMENT OF ENERGY

Paris Opera breaks with Russia

From Our Own Correspondent
Paris, April 3

The Paris Opéra has decided to end its agreement on cultural exchange with the Soviet Union after the Soviet authorities refused to allow Yuri Lyubimov, the young producer, to bring his version of the Tchaikovsky opera *The Queen of Spades* to France in June.

Mr. Rolf Liebermann, the administrator of the Paris Opéra, told a press conference here today that an alternative production of *The Queen of Spades* had been offered to him by the Soviet authorities but that he had refused it out of loyalty to Mr. Lyubimov.

Cancelling the production will cost the Paris Opéra about £75,000 because the sets have already been built.

Correction
To an agency report published yesterday it was wrongly stated that Portugal was among European countries which had altered their clocks two hours ahead of Greenwich Mean Time. In fact Portugal is now in line with British Summer Time.

Priests still believe devils possessed exorcised girl
Aschaffenburg, April 3.—Two priests accused of causing the death of Anneliese Michel, a young woman who had been exorcised, told a West German court today they were still convinced she had been possessed by devils.

Father Wilhelm Renz, a Roman Catholic priest, aged 67, said he was "Fäulein Michel, a student teacher, had six demons inside her before she died."

The second clergyman, Father Ernst Alt, said he had never considered the woman dangerously ill.

The two men are charged, jointly with Anneliese's devoutly Roman Catholic parents, with causing her death by neglecting to summon doctors to treat her. When the woman, who had a history of epilepsy, died under Catholic rites she weighed 68lb.

Father Renz said he had carried out the last exorcism rite the day before the woman's death on June 1, 1976. Asked why he had not called a doctor, he said the 350-year-old Roman Catholic ritual expressly stated that clergymen carrying out exorcism should not hurt themselves with medical matters.

Father Alt said the woman was sure she was possessed by devils and wanted the priests to drive them out. He quoted her as saying: "When this is all over, it must be made public so that people believe there are such things as devils."

Father Alt told the court that on October 31, 1975, he and Father Renz performed the rite. He said the woman returned, but so returned. Fäulein Michel believed that she had to endure her possession by demons to atone for the sins of German youth. The priests of the Catholic Church and another person whose name he declined to give.—Reuter.

British-trained general heads Portugal's army
Lisbon, April 3.—An intelligence expert trained in Britain and the United States was named today as Portugal's new Army Chief of Staff after a high command row in which two generals lost their jobs.

He is General Pedro Cardoso, aged 52, at present in charge of planning a new intelligence service. An official announcement said he would be sworn in tomorrow to replace General Vasco Vieira, aged 38, dismissed last week by President Antonio Eanes.

Speedier handover to Catalans pressed

From Harry Debellus
Madrid, April 3

Señor Josep Tarradellas, the president of the Generalitat, the Catalan regional government, conferred in Madrid today with Señor Adolfo Suárez, the Prime Minister, and other political and military leaders in an effort to speed up the transfer of responsibilities and authorities to the Generalitat.

After a one-hour meeting with the Prime Minister, Señor Tarradellas said that it had been as cordial as the previous ones, but he refused to disclose what had been discussed. He denied that a proposal to establish full legal parity between Castilian Spanish and the Catalan language was the most important of the matters under discussion.

Señor Tarradellas told reporters that he would meet Señor Suárez again on Thursday. He then left for talks with Lieutenant-General Manuel Gutiérrez Mellado, the Deputy Prime Minister for Defence.

King Juan Carlos will receive the Catalan leader on Wednesday. Before their meeting, Señor Suárez said that there were no conflicting viewpoints between himself and Señor Tarradellas.

"We both agree to work for a more democratic Spain, to strictly follow the Constitution through the establishment of home rule."

Although neither of the two mentioned it, one of the toughest points in the negotiations about the degree of autonomy for Catalonia was the matter of taxes and government expenditure.

Señor Manuel Fraga Iribarne, the leader of the conservative Popular Alliance and former Minister of the Interior, said in Granada at the weekend that the death penalty should be mandatory for the killing of a policeman. He also called for a law to increase police powers to deal with terrorism.

Princess returns: Princess Irene of Holland, wife of Prince Carlos Hugo de Bourbon-Parma, leader of the Spanish Carlist Party, returned to Spain today after nine years in exile.

The princess and her husband, who have French nationality, were expelled from Spain in 1968 for political activity against General Franco's regime. Prince Carlos Hugo returned to Spain five months ago.—AP.

Soviet patrol's minibus in Berlin incident
From Our Correspondent
Berlin, April 3

A Soviet military patrol in a minibus joined today the procession of cars which took President Scheel to a factory in the British sector of West Berlin.

The six-man Soviet patrol had apparently been waiting for the President's car for some time and then followed it even through red traffic lights.

When the President left the factory after a 90-minute visit to tag onto the presidential cars, but was held up.

Soviet patrols have increased in numbers over the past year in West Berlin after the three Western powers rejected Soviet attempts to curtail Western patrols in East Berlin.

British-trained general heads Portugal's army

From Our Own Correspondent
Lisbon, April 3

An intelligence expert trained in Britain and the United States was named today as Portugal's new Army Chief of Staff after a high command row in which two generals lost their jobs.

He is General Pedro Cardoso, aged 52, at present in charge of planning a new intelligence service. An official announcement said he would be sworn in tomorrow to replace General Vasco Vieira, aged 38, dismissed last week by President Antonio Eanes.

One of his first tasks will be to appoint a successor to General Vasco Lourenço, who was dismissed as military governor of Lisbon after being accused by the former Chief of Staff of indiscipline.—Reuter.

Pirate radios in Paris fool official jammers

From Our Own Correspondent
Paris, April 3

The pirate radio stations of Paris went on the air for an hour or so this morning taking advantage of a vast advertising campaign launched by Carrefour, the supermarket chain.

For some days now mysterious Carrefour posters have been going up on the streets, some bearing all round Paris, announcing "Radio Libre", starting at 7 o'clock this morning.

The boardings were appropriately decorated with spray guns giving details of the pirate radio's wave lengths and on time this morning they went on the air in such numbers that it was impossible for the French broadcasting authority to jam them all at once.

Young members of a local cooperative, called "Work and Struggle", then used plastic rubber dinghies and a todian canoe to reach the mouth of the river to show that the river was not only navigable but easily navigable and that little needed to be done to put its waters once again to good use.

They are calling for passenger steamers which would ply between Poite Milvia and the Tiber island and, after the shallows around the island, as far as the Magliana on the way to Ostia.

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Three little boys who symbolize the price Lebanese have paid

From David Watts
Beirut, April 3

Three little boys sitting on the ground in a tent stare blankly towards the light of the open flap. Their faces are drawn, their eyes lifeless. Their expressions have not changed since an Israeli air raid flattened their village in southern Lebanon and they have not spoken or been able to understand their mother, Mrs Souad Sorour, who stands over them, her face scarcely more animated than those of her sons.

The shock of the Israeli jets' attack on the village of Tair Haria has left the boys, all under the age of 10, in this state.

The trauma of the Sorour family are perhaps more visible and dramatic than those of many of the 120,000 refugees who have been forced out of the south by the Israeli invasion but the boys and their mother symbolize the awesome price that innocent Lebanese and Palestinian civilians have paid.

Apart from the number of deaths, for which no reliable figures are yet available with bodies being dug from wrecked villages throughout the south day after day, the lives and prospects of thousands of others have been ruined. The occupation of a fifth of the country has sent a mass of refugees north to Beirut, crowding the problems of a city already crowded with some 80,000 refugees from the civil war.

About 100,000 refugees are believed to have moved to Beirut in the day following the invasion. Thousands of them took over flats, houses and office buildings at gunpoint. Hotels were commandeered and beach houses taken over.

Numerous refugees are still without proper shelter and the United Nations relief and works agency has appealed for help in the supply of blankets, tents, food, clothing and cash.

Since the Israeli invasion in Lebanon were already refugees their problems are more easily recognized and tackled since precise numbers and family details are already on record. But for the Muslim Lebanese, such as the Sorour family, the experience of homelessness and uncertainty about their fate and their homes is a new and shocking experience.

The Sorours are housed in a tent camp near the Beirut International Airport, commanded by Lieutenant Hassan Soubra. Lieutenant Soubra, a young, fresh-faced Lebanese Army man, takes his job as camp "father" seriously.

His problems are formidable. There is an almost constant stream of people, mainly men, wanting to be let into the camp. Already there are 17 women and children to a tent. The menfolk must fend for themselves outside the camp.

The lieutenant hopes that his camp will not be needed for long. He supervised its building and the installations are solid and dependable. Concrete blocks make up the kitchen and reception office.

There are water and electricity supplies. Twenty scouts are available 24 hours a day to help with problems and keep the camp running with crisis efficiency. A doctor is on call at any time. There are cigarettes, chocolates and snacks on a stand not far from the gate.

The whole operation has an air of cohesion and purpose which masks the tragedy of the camp's inmates.

The situation a few miles away to the centre of Beirut epitomizes the inability of the Lebanese Government to tackle the situation. The Government's social security infrastructure has not been rebuilt since the civil war ended and the new influx of rootless thousands threatens to upset the fragile calm which the presence of large numbers of peacekeeping troops has maintained since the end of the factional fighting.

Government officials estimate that 9,000 flats and offices in the capital have been taken over. Every serviceable building in the city centre is now fully occupied by a refugee camp in microcosm.

Mr Salah Salaman, the Minister of the Interior, has said that families who fled from homes near the border will have to return soon.

The authorities estimated tonight that some 40,000 refugees have returned to their homes but with the Israelis showing no immediate sign of leaving there is little encouragement. Those who do go back face restrictions that seem unreasonable.

Many returning refugees have been told that if they are allowed into the occupied areas they will not be allowed to come back to it if they leave. Adults accompanying children have to leave the children to go on alone when they reach the Israeli lines.

Some of those whose homes escaped the Israeli bombing find the troops have systematically wrecked their homes.

Mr Park says Korean handouts helped US

From David Cross
Washington, April 3

Mr Tongsun Park, the South Korean businessman who admits to paying hundreds of thousands of dollars to influential members of the United States Congress, said today that he regretted "certain things" he had done.

But, he maintained, none of his actions was improper. They were designed to promote the national interests of the United States and Korea, which he described as America's staunch ally in the Far East.

Mr Park was testifying in public for the first time since he returned to Washington from South Korea a month or so ago as chief witness in the investigation into Seoul's alleged campaign to buy influential friends in the American capital. He returned here on the understanding that he would not be prosecuted for his part in this "Koreagate" scandal.

Since his return he has testified in secret before committees of both the House of Representatives and the Senate including the ethics committee of the Lower House, which today began a three-day public hearing.

Much of this morning's testimony was devoted to a long list of gifts and campaign contributions made to about 30 members of Congress between 1969 and 1970. They included cash payments totalling several hundred thousand dollars to former members of the House of Representatives, Mr Otto Passman of Louisiana and Mr Richard Hanna of California. Both have been formally indicted on charges of receiving illegal payments from Mr Park. Mr Hanna has pleaded guilty to a conspiracy charge.

Many of the other contributions, usually in the form of cheques, consisted of relatively small sums totalling \$500 or \$1,000 for campaign expenses.

In a separate development, Mr William Porter, a former American ambassador to South Korea, has confirmed earlier reports that the American secret services once had a bugging device in the residence of President Park Chung-hee in Seoul.

In an interview with the Columbia Broadcasting System (CBS), to be broadcast tonight, Mr Porter said he was told the bugging stopped before he arrived in Seoul in 1967. "I was told that it was not functioning," he said. "I gave a specific order that it was not to be renewed."



President Carter is embraced by President Tolbert of Liberia on his arrival in Monrovia

Carter warning to S Africa

Monrovia, April 3.—President Carter told South Africa today that it must move towards an internationally acceptable arrangement for black majority rule in Namibia (South-West Africa).

He said there would be serious differences with the United States if South Africa ignored the United Nations supervision of elections in the territory and barred participation by the South-West Africa Peoples Organisation (Swapo).

The President made his comments to reporters as he flew to Monrovia for a four-hour visit to Liberia. Mr Carter came here from Lagos, where he and the Nigerian head of state, Lieutenant-General Olusegun Obasanjo, said they were determined to eradicate South Africa's "evil and oppressive system of apartheid."

But the President resisted General Obasanjo's call on the United States, which has large business investments in South Africa, to impose economic sanctions in support of black

nationalist movements seeking to overthrow apartheid.

He made it clear that for the time being at least, the United States would not go beyond observing the United Nations arms embargo against South Africa and using political and moral pressure for change.

Mr Carter received a tumultuous welcome as he rode with President William Tolbert to Liberia's Executive Mansion. Crowds estimated at 100,000, more than half the population of the Liberian capital, jammed the streets to wave and cheer.

Mr Cyrus Vance, the American Secretary of State, said here that the first round of new talks on Rhodesia, proposed by the United States, will probably take place on April 15 in Dar es Salaam.

The Salisbury accord set up a transitional government headed by Mr Ian Smith, the Rhodesian Prime Minister, Bishop Muzorewa, Mr Sithole and Chief Jeremiah Chirau of the Zimbabwe United People's Organisation.

Bishop Muzorewa's party accused Mr Carter of trying to "trade the masses of Zimbabwe for Nigerian oil."

Police in Bulawayo yesterday dispersed with teargas a crowd of about 2,000 blacks demonstrating against the internal settlement agreement.

The Western plan provides for the retention of a South African force of 1,500 men to be based in Grootfontein and/or Ochire, two large and sophisticated camps in the north of the territory. Swapo have wanted the force to be based at Karibub in the extreme south but the Western countries said this was "tantamount to demanding South Africa's complete withdrawal."

However, all South African troops will be withdrawn within

Skilful Western plan narrows Namibia gap

From Nicholas Ashford
Johannesburg, April 3

The West's final proposals for a transfer of power in Namibia (South-West Africa) which were presented to South Africa and the South-West Africa People's Organisation (Swapo) at the end of last week, are a masterpiece of compromise diplomacy.

By skilful draftsmanship, and often deliberately vague wording, the five Western members of the United Nations Security Council (Britain, the United States, France, West Germany and Canada) have managed to bring the protagonists closer together than would have been thought possible when the Western initiative first began last year.

A still wider gap existed between the South Africans and Swapo but in the words of a Western diplomat in Lusaka, "it is now merely a question of political will whether that gap can be bridged or not."

Whether that political will exists will become clear during the next week or so, since both sides have started their views on the proposals. The West does not expect outright acceptance by either side, but is hoping that the proposals will not be rejected "out of hand."

If neither side rejects the package, then the Western nations will present it to the Security Council for approval.

"There can be no doubt that the Western plan puts both us and the South Africans in a spot," admitted one senior Swapo member in Lusaka after the proposals had been presented. "If we turn them down it will be said we did so because we are afraid to take part in free elections. If South Africa rejects them, it means they have admitted that the granting of genuine independence to Namibia but all along was just intent on going ahead with the internal settlement."

What the Western proposals attempt to do is to strike a balance between the South African demands on the one hand and those of Swapo on the other. Thus, on the key question of the retention of South African troops in Namibia during elections the Western plan leans towards Swapo on numbers but towards South Africa on their location.

The Western plan provides for the retention of a South African force of 1,500 men to be based in Grootfontein and/or Ochire, two large and sophisticated camps in the north of the territory. Swapo have wanted the force to be based at Karibub in the extreme south but the Western countries said this was "tantamount to demanding South Africa's complete withdrawal."

However, all South African troops will be withdrawn within

seven days of the final national elections for a constituent assembly being held this year.

On the question of a United Nations presence during the interim period until elections are held, the Western plan tends to favour Swapo. The UN presence in the territory will be the United Nations Special Representative (not yet named) who will have an effective power of veto over the South African-appointed Administrator General, Mr Justice M. Steyn (although this was stated so bluntly in the proposals).

The United Nations representative will have final authority over the South African police who will continue to be responsible for law and order until elections are held. The "interim" representative will be a person who will be appointed by the United Nations Secretary-General to handle the question of political prisoners will also be responsible to the United Nations special representative.

Against this, however, a decision by the Western nations to leave out the enclave of Walvis Bay in their proposals will be a disappointment to Swapo, who have always maintained this vital port was an integral part of Namibia.

The West's view is that Walvis Bay should not be allowed to founde a settlement. If Swapo does reject the Western plan then it is likely because of its failure to include Walvis Bay. However, the Western powers in Swapo will not do that.

They have been accused by the latest remarks of Swapo's president, Mr Nujoma, who is at present in India, that his organization still willing to take part in the elections.

The West is less confident about South Africa's new. For the past few weeks South Africans have been giving heavy hints about a new internal settlement while the media has been carrying out a massive, and inspired and skillful, campaign.

If South Africa does down the plan the first sign Powers have made it is that they may no longer be so resistant to United Nations economic sanctions against South Africa. They have said that the South will have to face along and debilitating war against its northern border.

Delhi, April 3.—Mr. Indira Gandhi today denied reports that the latest Western proposals for Namibian settlement, but there could be no comment over Walvis Bay. Reuters

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Poorly-led Frelimo no match for Rhodesians

From a Correspondent
Machipanda, Mozambique,
April 3

Silhouetted against the blue sky, a Rhodesian soldier peers through his binoculars, carefully examining the visitors. Beside him in the high-gazet emplacement, perched on top of the abandoned customs shed, his companions are suddenly alert, the unexpected arrival breaking up an otherwise dull afternoon.

Across the twin 10ft fences which now mark this border, half a dozen soldiers of Mozambique's Frelimo Army pose for photographs and, like tourist guides, point out the sites to visiting journalists.

But the serenity of the scene is deceptive, for lorry-loads of troops are stationed in the roads nearby, military checkpoints control all movements and the streets of the town of Vila Manica about six miles away are crowded with soldiers.

The increased Frelimo activity is part of a new effort by Mozambique to defend its border after more than 300 Rhodesian marauders last year. A large build-up of troops and equipment is also taking place in Tete province in the north, sources said.

Tracks crisscrossing the bush in the area suggest that at least some of the country's 80 Soviet-built T34 tanks have been moved into position. The small amounts of light artillery, including Sam missiles received from the Soviet Union, have also been deployed in the border regions, the sources said.

While it is the nationalist guerrillas Rhodesia is at war with Mozambique—which provides the guerrilla bases—has suffered much at Rhodesian hands.

Several villages have been occupied at various times, large numbers of Mozambican soldiers and civilians have been killed,

telephone and tele links between Maputo and the rest of the country have been severed and food supply lines disrupted.

Mozambique has been unable to stop the Rhodesians. Its 12,000-strong Army is as one Western diplomat described it, "for the most part poorly trained, poorly equipped and poorly led."

Apart from the tanks and small amounts of light artillery, diplomatic sources say "a few" MiG jet-fighters have also been received from the Russians but nothing on the scale expected when the two countries signed a treaty a year ago.

"What they really need is something with which to shoot those Rhodesian helicopters down," a Western diplomat said, "and it's apparently not coming."

Last week's visit by Mr Sergey Sokolov, the Soviet Deputy Defence Minister, which produced a new promise of help, coupled with the planned visit by Cuba's Foreign Minister, served to strengthen the belief that more aid might be forthcoming now that the war in the Horn of Africa is apparently drawing to a close.

Cuba's military role here has increased slightly in recent months, according to the sources, but while the total number of Cubans is put at 400 to 600 diplomatic estimates of the number of military advisers vary widely, ranging from 50 to 500.

Officials here insist that Mozambique will fight its own wars, and despite the border build-up and new promises of military help, few observers believe a military offensive is imminent.

"We cannot even keep the Rhodesians out," commented one Mozambican journalist. "To go in after them would be suicide."

Kenya backs Ethiopia demands on Somalia

Continued from page 1

It is to weigh this choice between moral imperatives and the claims of national interest, that the Foreign Office review takes place this week.

In Uganda, the decision was perhaps more clear-cut, in the sense that British connections with the country, although of long standing, had been reduced to a minimum, and Uganda has no strategic importance in Africa. In the Horn of Africa, by contrast, events are moving swiftly in an area which obviously has vital strategic significance for the West as a whole. Moreover, Addis Ababa is the headquarters of the Organisation of African Unity.

Our Nairobi Correspondent writes: Dr Munyua Waiyaki, the Kenyan Foreign Minister, has said here that Kenya and Ethiopia intend to renew their mutual defence pact, which is due to end in July. The minister was speaking after his return with a Kenyan goodwill delegation last night from a five-day visit to Ethiopia.

The Kenyan delegation had discussions with "Ethiopian leaders" in Addis Ababa and also visited Dire Dawa and the

town of "Gode" which recently recaptured Somali forces. Dr Waiyaki said the pact had destroyed the town and 100 military bases there, fleeing.

The visit to the former areas appears to have made a deep impression on the Kenyan delegation. Dr Waiyaki had shown how Kenya is self-reliant in case of war.

Dr Waiyaki said he and Ethiopian leaders had met at length the situation in the Horn of Africa. Kenya portends Ethiopia's role in the Somalia crisis, and renews claims on the territory.

Kenya and Ethiopia must accept all United Nations and Organisation of African Unity principles of non-interference in other states' affairs and must agree to pay compensation for damage caused in Ethiopia.

Rome, April 3.—Enrico Berlinguer said today that captured nearly all of the 100 Italian soldiers from the 1st Battalion of the 13th Brigade. Addis Ababa straddles main road from Addis Ababa to Asmara, the Eritrean capital.

Leading article, p. 1

Briton's body flown out

From Our Own Correspondent
Johannesburg, April 3

The bodies of a 19-year-old Briton, Mr Nicholas Love, and two South African game rangers who were shot in Botswana last week were flown to Pretoria today after negotiations between the South African and Botswana governments. The two South Africans were Mr Billy deBeer and Mr Michael Arden.

Post mortem examinations are to be held in South Africa. According to a Botswana government statement last week

the three men were shot by Botswana soldiers after they escaped from custody three, who were arrested to the Rhodesian and African borders, were seen carrying out espionage duties.

However, several African newspapers pointed to discrepancies in Botswana version of the killing, leading up to the killing of the British man.

The parents of the British man, Mr L. Love, are in South Africa.

\$87m deal averts New York transport strike

From Michael Leaman
New York, April 3

The Monday morning rush hour was no more horrific than usual for most New York commuters today, which came as a great relief to them. A last-minute pay deal with bus and subway workers at the weekend averted a strike which had been anticipated with mounting trepidation.

The settlement was a modest one—a pay increase of 6 per cent over the next two years—and Mr Edward Koch, the mayor, promised that it would mean no rise in the bus and subway flat fare of 50 cents (about 28p). Yet it has not necessarily ensured labour peace for the coming months and, more important, it may not go down well with members of Congress in Washington.

They have still to approve new federal loans to enable the city to escape a fiscal crisis of the kind that brought it to the brink of bankruptcy two years ago.

The estimated cost of the pact is \$87m, but the key point is that the settlement with the public transport employees is traditionally regarded as a standard for pay deals with other city workers. Increases on that scale for the rest of the labour force would cost \$800m over the two years.

The city wants the other employees to accept less than the bus and subway workers and is trying to limit the total cost to \$600m. Union leaders say they want more, but they are in a weaker bargaining position because they do not have the same power to cripple the city.

The pact with the transport employees was settled at 4 am on Saturday, four hours after the strike deadline set by the union. It was almost inevitable that the negotiations would continue until the last minute, since it was important for both sides—especially for the mayor—to prove that they had been as tough as possible.

Mr Koch had already proved his determination not to be over-generous by devising an elaborate emergency plan to cope with the loss of the city's public transport. Cars would be allowed into the centre of the city with fewer than three passengers, taxis would have been able to take extra passengers at extra fares. Bridges normally reserved for powered vehicles would have been opened up to pedestrians.

A separate strike of Long Island railway carriers thousands of commuters into New York was also averted after a hectic weekend of bargaining. The only transport which did go ahead was the rapid transit system Staten Island and a bus in New Jersey.

However, a strike by bus and subway workers is still out of the question. The city is now waiting for the agreement reached on Saturday, many have expressed disappointment that the agreement is not as good as they had hoped. The mayor's agency plan might get into effect.

OVERSEAS

Founder of Unification Church better known in Korea as owner of weapons factories

From Peter Hazelhurst in Seoul and Diana Patt in Washington

Mr Suu Myung Moon who is looked upon as the Messiah by his followers in the Unification Church, is a prophet without honour in his own country. In South Korea he is better known as the owner of weapons-making factories than as an evangelist.

Mr Moon owns two of these factories in South Korea, the larger in the new Changwon Industrial complex near Pusan. This is known as the Yewha Air Gun Company at 550 Kuri Township, Suseok Ri, in Yangju County, Kyonggi Do, about 21 miles north-east of Seoul.

Also in Kuri is a complex owned by Mr Moon which was formerly called the Korean Anti-Communist Training Centre and which used to hold courses for village chiefs, army reserves and officials. The complex, widely alleged to have been an indoctrination centre, was indirectly supported by the South Korean Government until 1974.

Courses consisted of one week lectures which were sometimes given by guest lecturers from national Police, Defence College intelligence officers and the Korean Central Intelligence Agency (KCIA). The lectures covered subjects such as the threat of Marxism, North Korea and guerrilla warfare in China.

However, when the Unification Church came under attack in the United States after the Watergate debacle three years ago, the Government apparently withdrew its tacit support from the church's anti-communist centre. The centre is now named the Tong Il Theological Seminary and consists of lecture halls, a mess and dormitories. A former member of the church says it can contain 100 pupils.

According to Professor Tak Myung Heon, a Korean Theological Seminary and director of the New Religious Research Institute, the Moon seminary holds one-year courses to train its "ministers".

Professor Tak, who is an authority on the Unification Church, says that the majority of Protestants shun the church. Moon only enjoys a



Mr Suu Myung Moon: His followers celebrate Christmas on his birthday.

large following overseas. His followers here are at the most up to 10,000 persons, mainly poor unsophisticated people. Moon claims he has 360,000 supporters in Korea, but a former disciple who defected from the church confirms Mr Moon's figure.

Professor Tak claims that Mr Moon has registered 935 churches in official Government reports on religious organizations. But an internal church magazine obtained by him lists the number of Moon churches in Korea at 172.

Members of the Unification Church in Korea celebrate Christmas on January 6—Mr Moon's birthday. "He claims he is the new Messiah, superior to Buddha, Jesus and Confucius. The Unification Church has never been a Christian church. It is a cult, and it puts Korea to shame before the world", Professor Tak says.

Although the Korean Embassy strongly denies any connection with Mr Moon and his Unification Church, a student of Korean American relations maintains that it would be impossible for Mr Moon's factory exports of ginseng products, the 11 Wha (White Fire) Company, whose exports to Japan alone in one year are worth \$10m (\$5m); 11 Shin Haudicrafts, which produces stone vases; the Donga Titanium Company, which produces paint; the Little Angels Choir; the Korea-United States Freedom Cultural Foundation, which is run by Mr Pak Bo Hi in the United States; and Victory over Communism Federation, which has branches all over the world.

Mr Donald Ranard, director for the Centre for International Policies in Washington and formerly head of the State Department Korean desk, said: "No organization of his size with a Korean base could exist without some linkage to the Korean Government."

"When the KCIA has infiltrated Christian churches in Korea to the extent it has, isn't it peculiar that an offbeat Korean church is moving ahead so rapidly and gaining members without help from the Korean Government?"

Mr Moon's interpreter, Mr Pak Bo Hi, has been shown to have obtained indirect help from the Korean Government for Mr Moon's businesses. General Kim Hyung Wook, former director of the KCIA, has testified to the Fraser Committee on the head of state, General Yumun Acheampong, who has been a member of the Unification Church since 1974, that he had been given permission for the Little Angels choir group to leave Korea and tour the United States.

Mr Pak Bo Hi is a retired lieutenant-colonel who served as interpreter and intelligence officer in the Korean Eighth Army. He joined the church as a major in the early 1950s and, according to Professor Tak, is the real second in command of the Moon movement. The church is split into two factions, the Korean group against Mr Pak and the outside followers of Mr Moon for Pak.

While there is no absolute proof of Mr Pak's connection with the KCIA in the past, most government servants and army officers are committed to cooperate with the agency. In 1974, Mr Pak was dismissed from his position as director of the Unification Church after a furor erupted in the United States over Mr Moon's hold over young American converts. As part of the Korean Government's effort to disavow the 11 Wha Ginseng Company was raided for tax evasion in February, 1977.

Observers in the United States who believe there is still a strong link between the Government and the Unification Church argue that although corporate officers of Mr Moon's ginseng tea company had been prosecuted for illegal transfer of funds to a tax-exempt organization, the fines in Korea were not substantial enough to be punitive.

(To be continued)

Ghanaian poll official emerges from hiding

From Richard Wigg

Mussoorie, N India, April 3. It was the last day of business for a beer and spirits store here which first obtained its licence in 1880.

"The British drank a great deal on holiday in this hill station, and the women too", an old Indian behind the counter told me proudly. "Then we imported wines from France or Italy, port, sherry, and brandy and had whisky only from Scotland." He pointed with obvious disdain at a row of bottles of today's Indian-made whisky.

Mussoorie, known as the "queen of hill stations" in the days of the raj, when Indian maharajahs and British officials and their wives came to enjoy themselves and escape the stuffy pomp of Simla, is now hard hit by India's prohibition decree.

From April Fool's Day (as many Indians who like a drink have noted) the store's almost 100-year licence has not been renewed because of the prohibition policy ordained for India by Mr Morarji Desai's Government.

For most of India, prohibition is to be introduced gradually over the next four years; but this peaceful holiday resort in the Himalayan foothills was selected as one of seven districts in Uttar Pradesh state to go totally "dry" from the start.

Even foreign visitors will be allowed hardly more than one bottle of beer a day and there is no more alcohol available in any bar, club, hotel or liquor store.

At the Savoy Hotel the atmosphere of British India of the 1930s still lingers on, as nostalgia as a ruse from an old gramophone. There are five-course

Bars where memsahibs drank in days of British raj become reluctant leaders of Delhi's prohibition

Liquor ban hits Indian hill-station

From Richard Wigg

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At the Savoy Hotel the atmosphere of British India of the 1930s still lingers on, as nostalgia as a ruse from an old gramophone. There are five-course

meals, hot-water bottles, fires in the bedrooms, and a plethora of servants.

But not for long. "This will be Mussoorie's death", the manager told me. He had already lost two conferences booked from Bombay. "If only they had introduced it gradually", he went on. "We already have one dry day a week. Why not more or cut our bar hours? We shall lose all our holidaymakers to 'Desai's Kashmir'."

The losers in Mr Desai's latest bout of moralizing will be Mussoorie's waiters, barmen, hotel servants and shopkeepers. Those who stand to win are the drink retailers in areas 90 minutes' drive away in the still "wet" districts. They have bought licences there at double last year's prices, anticipating income from the sale of the state Government's liquor.

Already she has said she favours prohibition by persuasion only and not by compulsion.

Two big problems confront the Government. Will India's police force, widely known for liking a drink, really be capable of suppressing the bootlegging Mafia which is now concentrating on the new "dry" areas?

And how will the Government combat increased resort by poor Indians to illicit and poisonous hooch? Last year 110 people died in one drinking tragedy in Gujarat. Mr Desai's home state, which has already gone "dry".

The punsters are enjoying a joke here: "It was nashandi (compulsory sterilisation) which brought Mrs. Gandhi down, they say. How nashandi (prohibition) could do the same for Mr Desai."

An editorial in the *Dehra Dun Express* asked last

Mr Brezhnev appeals to patriotism of troops along the Chinese border

From Michael Binyan

Moscow, April 3. President Brezhnev today visited Soviet units stationed near the Chinese border and told troops to be worthy of those who had not spared their blood to defend the Soviet Union in the Second World War.

The Soviet leader, on the sixth day of his tour through Siberia and the Soviet Far East, inspected units at Pechanka, near the city of Chita, about 200 miles from the Chinese frontier.

Accompanied by Marshal Mstislav Ustinov, the Defence Minister, he met commanders of the Trans-Baikal district and discussed the state of combat training and political instruction in the district's armed forces.

Mr Brezhnev recalled when signing one unit's book of honour that he himself began his military service in Cbika in 1925-36.

His appeal to the patriotism

of the Second World War, an oft-repeated call, was a clear attempt to boost the morale of the large Soviet force along the whole frontier. So far, however, he has not visited any of the Chinese clashes with the Chinese have occurred.

President Brezhnev's tour has deliberately underlined Soviet combat readiness on the Chinese frontier. On Friday, the Soviet leader visited a missile unit near Novosibirsk, Siberia's largest city, and over the weekend he visited an aircraft factory in the Irkutsk region.

Tension with China appears to be rising again after the recent Chinese rejection of a Soviet proposal for a joint statement on the principles of mutual relations. A lengthy commentary in Pravda published at the start of Mr Brezhnev's tour said any pull-back of Soviet troops from the frontier would merely open the way for the Chinese to occupy large areas of territory.

In many of the main cities his train has passed through he has been critical of the poor performance of industry and planning. In Krasnoyarsk he called for an end to delays in building new industries in the area.

Bonn, April 3.—Mr Brezhnev will visit West Germany early next month, the Government announced tonight.—Reuter.

Army called in to stop riots in Hyderabad

From Our Own Correspondent

Delhi, April 3. Troops were sent in today to patrol the streets and enforce a curfew imposed in Hyderabad and Secunderabad, twin south Indian cities with sizable Muslim populations, after police firing on angry crowds had left 80 injured.

Today's shooting came after the worst incidents in three days of disturbances, violence and arson. A general strike, called in the two cities by Muslim communal leaders, is being backed by the Janata Party.

The origins of the trouble lay in the alleged beating to death of Ahmed Hussain, a Muslim worker, while in police custody last Thursday. His wife has allegedly been raped.

As the strike began today mobs attacked and set on fire police stations, railway and bus stations and put up road blocks.

In brief

Heyerdahl craft burnt out

Djibouti, April 3.—Tigris, the red craft Mr Thor Heyerdahl, the Norwegian explorer, has been destroyed by fire.

The craft was six miles offshore when the fire broke out. The cause was not known and there were no reports of casualties among the crew of 15. Mr Heyerdahl was on a voyage aiming to prove that the Ancient Sumerians sailed through the Gulf and into the Indian Ocean about 5,000 years BC.

Successful surgery

Boston, April 3.—John Wayne, the actor, underwent successful open heart surgery in hospital here. He is 70.

Amin rights decision

Nairobi, April 3.—President Amin of Uganda, whose military regime has often been accused of suppressing human rights, is to set up a human rights committee in his country, Radio Uganda reported.

15,000 left homeless

Manila, April 3.—Fire fanned by high winds destroyed hundreds of slum homes in Manila, leaving up to 15,000 people homeless.

Bulgarian dissidents

Vienna, April 3.—A dissident group has emerged in Bulgaria with a six-point "declaration 78" against violations of human rights, the Vienna newspaper *Die Presse* reported.

Third World report

Africans unite to study their heritage

From Charles Harrison

Nairobi

A new organization has been established here which plans to give the people of Africa a better understanding of their heritage.

The Organization for Museums, Monuments and Sites of Africa (Ommsa) recently held its first general assembly in Nairobi, and it showed how united the African states are on the need for a stronger voice in developing and projecting their rich range of cultures.

"For far too long, this continent, on which the scientific evidence shows that man and his earliest works must have originated, has been misrepresented as not having contributed significantly to the civilization of mankind," said Nana-Kow Bondzie, the Ghanaian who was interim secretary-general before the organization's Nairobi meeting.

Africa has produced a near-complete skeleton of a hominid that is four million years old. The evidence of the early Egyptian civilization has been fairly well preserved, but it is not widely realized that much of the art in the Egyptian tombs, and many of the customs of ancient Egypt, could have originated in indigenous African cultures much farther to the south in what was until quite recently the "dark continent".

Delegates from 18 African countries, from Morocco, Algeria and Egypt in the north to Tanzania and Zaire in the middle of the continent, exchanged experiences at the meeting. They agreed that the organization would study the training and technical needs of Africa's museums, monuments and sites, and would act as a clearing house for information and stimulate individual states to protect the relics of their past.

Nana-Kow Bondzie, in fact, suggested that the circle of civilization could have started from Africa, moving through Egypt to Greece and Rome, before returning to Africa in very recent times.

The formation of his organization—whose crest shows the continent of Africa inside a symbolic pyramid which is enclosed in a circle—arises from an increasing realization of the need to unite Africa in preserving and developing its history and pre-history.

But it was only in 1975, at the Unesco-sponsored International Conference on Cultural Policies in Africa held in Accra, that the decision was taken to establish such a body. The idea was taken a stage further in 1976, when a preparatory meeting was held in Nairobi. Now, with the holding of its first general assembly and the formal adoption of its constitution, Ommsa is fully established, with headquarters in Accra.

The new secretary-general is Mr Kwasi Myles, assistant director of monuments and museums in Ghana. "We all realize the importance of getting together as professionals to work out systems of cooperation designed to protect Africa's heritage", he said.

The Nairobi assembly showed that different importance is attached to museums in different parts of Africa. Egypt is a special case here, but other African countries (Nigeria and Kenya, for example) have done a great deal of work in a comparatively short time.

But for many other areas the hope is that the formation of Ommsa will stimulate a much greater interest in studying and preserving Africa's own roots.

Press freedom criticized at Jakarta meeting

Jakarta, April 3.

Lieutenant-General Ali Murtopo, the Indonesian Minister of Information, said today that the communications gap between the industrial and developing countries was widening with the advance of technology.

He told the opening of the second meeting of the Coordination Committee of the Press Agencies Pool of Non-Aligned Countries. "We know that in communication, as much as in other fields, a gap exists between the developed and developing world. The news that reaches a non-aligned country on events taking place in

another non-aligned country usually comes from the media sources of a developed country."

This put the non-aligned countries at a disadvantage as the interpretation of the news was left to the supplier, which in many cases had a different interest than the recipient.

The meeting might discuss the creation of a news centre to pool news from developing countries for distribution.

He went on: "More and more people in the world are coming around to reject the libertarian concept of press freedom as the only concept that should prevail."—AP.

81 face £5m-a-year social security fraud charges

From Our Correspondent

Melbourne, April 3

Eighty-one people, including five doctors, appeared before the central court in Sydney today on conspiracy charges involving fraudulent social security payments of about \$A9m (about £5.6m) a year.

In raids over the weekend 100 people from the weekend Greek community, including the doctors, were arrested. The police believe they have broken a conspiracy in which 1,200 people, including 300 now living in Greece, have been receiving benefits fraudulently.

Two doctors were among the first to appear in court today. Mr Terry Griffin, the prosecutor, said that they had conspired with others to defraud Australia between January 1972 and last month. He said that five doctors had given other defendants enabling them to receive sick leave and permanent invalid benefits from the Department of Social Security.

After the first 12 defendants were charged, the magistrate adjourned the case until June 12. All the defendants were released on bail and were ordered to surrender their passports. More arrests are expected.

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هاتمة الفصل

Special Report

COMMUNICATIONS

Key role of tiny marvel

by Wright

Just one centimetre and made from sand. Yet over the years, this tiny microelectronic marvel will increase the speed at which the telephone network, and the introduction of Videodata for public service next year, represent milestones in the impact of technology on society.

It was probably Johnson who said: "Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it." Judging by some of the extraordinary requests for information which arrive at *The Times*, many obviously intelligent people are not adept at finding information.

But with services like Videodata the process is being turned round. Information is being put into the hands of the public. And there are already unsatisfactory side-effects to that state of affairs with, for instance, the electronic equivalent of the unsolicited direct mail selling campaign. In the United States recorded telephone selling is done with cheap microcomputer machines that can transmit a message to a list of subscribers, whom it automatically dials.

Another disturbing aspect concerns the levels of manpower needed for industries forming part of the emerging information technology sector of the economy. The transition from mainly electromechanical machinery to electronic exchanges and telephone handsets by the Post Office means a change in the number of jobs.

The manpower subcommittee within the National Economic Development Organisation responsible for looking at the influence of new technologies on employment are the only forums at which employee, employer and government representatives assemble to discuss the subject so far without much success in reaching an understanding of different minds.

Hence the studies concerning the political implications of the technologies

extending from stock exchange figures to information about holidays or welfare services.

Indeed, decisions made in the past 12 months for the go-ahead with System X, or the type of computer-controlled exchange to be built for the British telephone network, and the introduction of Videodata for public service next year, represent milestones in the impact of technology on society.

It was probably Johnson who said: "Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it." Judging by some of the extraordinary requests for information which arrive at *The Times*, many obviously intelligent people are not adept at finding information.

But with services like Videodata the process is being turned round. Information is being put into the hands of the public. And there are already unsatisfactory side-effects to that state of affairs with, for instance, the electronic equivalent of the unsolicited direct mail selling campaign. In the United States recorded telephone selling is done with cheap microcomputer machines that can transmit a message to a list of subscribers, whom it automatically dials.

Another disturbing aspect concerns the levels of manpower needed for industries forming part of the emerging information technology sector of the economy. The transition from mainly electromechanical machinery to electronic exchanges and telephone handsets by the Post Office means a change in the number of jobs.

The manpower subcommittee within the National Economic Development Organisation responsible for looking at the influence of new technologies on employment are the only forums at which employee, employer and government representatives assemble to discuss the subject so far without much success in reaching an understanding of different minds.

Hence the studies concerning the political implications of the technologies

of inbuilt unemployment in the economy provoked by new technologies are obvious and raise the question, to which no answer is yet apparent, where are new jobs to come from in a society in which increased automation means less work in manufacturing and administrative tasks.

In the first place industry in the United Kingdom has to compete with the major technological nations in making the transition to the era of information technology, which has followed the electronics revolution that in its turn followed the plastics one. Changes in management practice to cope with the range of issues raised by the microelectronics invasion are being made on several fronts.

They include help for industry from the wide body of technical knowledge in the academic world. For instance, Cambridge University and several large firms in the telecommunications industry are responsible for the new Cambridge summer school on modern engineering concepts. It is intended for many industries faced with introducing modern materials and techniques into their factories.

The Cambridge scheme is aimed at two groups of scientists and engineers who have moved, or are about to move, from a close involvement with technical work into wider management. One group is in the 30 to 45 age range. They will encounter the influence of technical ideas outside their specialised knowledge, and for some outside the topics covered in their original training.

The other group consists of senior professional engineers who are also changing their area of interest. Thus the purpose of the study of modern engineering concepts is to provide a foundation for judgement of future trends in technology; to give an insight into the most recent ideas in science and engineering; and to explain the subject so far without much success in reaching an understanding of different minds.

Hence the studies concerning the political implications of the technologies

behind the telecommunications and electronics industries, with an option on the course to examine "energy and its utilization". But the main subjects pinpoint the technologies that are changing the structure of the telecommunications and the computer industries.

The penalty for ignoring economic aspects of the new technologies has been seen already in some industries. The traditional manufacturers of small calculators and watches, for instance, failed to see the possible invasion by the makers of microcircuits and microcomputers. These well-established industries have come under heavy pressure from the new products of these science-based young industries.

The same trend is occurring between the telecommunications and the computer industries, though in a slightly different way. Companies in the telecommunications industry are turning more of their attention to the communication of information between their equipments, and the quest for new markets has taken them into natural applications such as computer-controlled private branch telephone exchanges.

On the other side of the fence the telecommunications manufacturer is building computer-controlled exchanges for the public switched telephone network, and from there is extending this experience in digital data handling into developing desktop terminals.

There is a vast assumption throughout the world of telecommunications that a well-established correlation exists between the number of telephones in a country and the gross national product of that country for each inhabitant. The world's telecommunications traffic certainly continues to expand at 12 to 15 per cent a year, even though the rest of world trade is moving at a much lower level. Perhaps we talk to each other more often when we are depressed.

The assessment of a country's economic status by its telephone installations



also failed to explain the French situation. It group belonging to the CCITT (International Telegraph and Telephone Consultative Committee). It has produced Huntley's Law among its findings. It concerns the ratio between the capital invested in telecommunications equipment and the annual financial revenue of the agency operating the telecommunications network. The ratio is in the order of 3:1.

It illustrates the vast difference in structure between telecommunications underpinning and ordinary industrial and commercial undertakings. For in the case of the latter, the capital assets are usually less than 1:3 of annual turnover. In other words the fixed assets of a telecommunications operating agency are nearly 10 times greater than those of an industrial organization.

The author is Science Editor, *The Times*.

X cuts cost

by Roy Harris,
David Leakey,
Jock Marsh and
Gordon Paterson

System X is the family of advanced switching systems being developed in a collaborative programme by the Post Office and its principal suppliers of telecommunications equipment—GEC, Plessey and STC. Based upon microelectronic, digital and software technologies, the same principles, techniques, standards and basic designs will be used in a comprehensive range of applications—for local, trunk and international calls, for telephone and data services, and for operator and servicing facilities.

Overall, System X represents the biggest single telecommunications development ever undertaken in Britain. More than 600 engineers are involved in the Post Office and industry, and the overall development programme is expected to cost some £150m before the full range of applications is in service.

The design phase is now in full swing, the detailed testing of individual elements of the system is in progress, plans for production and implementation are being established, and by the end of the year the Post Office expects to place orders for the first System X local and trunk exchanges, which will be carrying live traffic in the early 1980s. By the late 1980s Post Office annual ordering levels for System X are expected to run at about £200m, at present prices.

System X is a key development for the future of telecommunications in the United Kingdom, and the Post Office and the firms involved are committed to its success. For the Post Office, it is the central feature of an overall strategy for the evolutionary development of the British telecommunications network, which will pave the way for an expanding range of telecommunications services and facilities for the customer in the future. For industry, System X is being designed to become fully competitive on world markets, and therefore to give a big flip to British exports in telecommunications.

But System X is part of a revolution in telecommunications that is taking place all over the world, in which established forms of transmission, switching, signalling and control are giving way to new ones. Thus analogue transmission is giving way to digital, electromechanical switching is giving way to electronic switching—and digital switching in particular—and the information required to set up and control calls (and to manage the overall system) is increasingly processed and transmitted as digital data.

The impact to the customer of these innovations cannot be immediate, but in the coming decades it will bring about striking changes to the costs and capabilities of telecommunications networks.

Many of the basic concepts used in System X—and comparable developments overseas—had their origins in the pioneer work carried out in Britain in the 1950s and 1960s. Pulse code modulation—the basis of the digital transmission of speech—was a British invention; many of the time-sharing principles used in digital switching were first recognized in the United Kingdom. Live service traffic was first switched digitally through an experimental installation at Empress exchange in London in the late 1960s, and under processor control at Moorgate a short time later.

Joint studies in the early 1970s showed that the scale of the development required a coordinated attack by the manufacturers, and that even with their combined resources it was essential to rationalize design problems and to meet home and export requirements with many of its features are the same basic designs. This specifically intended to mean a relationship in

which the export and production interests of industry, and the service and operational interests of the Post Office, could all be brought to bear on system development; and in which the specification of requirements could iterate with design in ways that enabled the most effective overall course to be identified and followed at all stages.

The resulting relationship is based on collaboration in the development of overall strategies for System X and in the definition and coordination of development projects. These are carried out through contracts let and funded by the Post Office, which provide for the interchange of design and other information to enable each firm to play its part in the development programme and the subsequent supply of equipment. A close watch is kept on progress against plans, expenditure against budgets, and the overall economic value of the development.

At present, the prospects are excellent, and the collaborative arrangements are working well. It may have, for example, overcome the difficulties of reconciling Post Office and export requirements and of establishing standards jointly. Good use has been made too of the opportunities for interaction and iteration in the specification and design processes.

Both processes are essentially dynamic, and necessarily so at a time of rapidly changing technology when new and potentially advantageous microelectronic devices become available almost weekly; when, collectively, telecommunications users are becoming increasingly interested in an expanding range of services and facilities—voice, visual and data; and when success to exports means meeting diverse overseas requirements quickly and effectively.

Fortunately the concepts of System X lend themselves to the dynamic development and approach to development of telecommunications networks. This specifically intended to mean a relationship in

continued on next page

CA.PA.BIL.I.TY: THE QUALITY OF BEING CAPABLE.

In the world as a whole, there are fewer than 10 telephones per hundred population.

This compares with 50 or 60 telephones per hundred population in many industrialized countries.

The provision of basic telephone service is thus a very real need in many parts of the world.

Concurrently with this need, the technology of telecommunications is changing and becoming more sophisticated.

With the transition from electromechanical systems to electronic systems, telecommunications administration



Ericsson's AXE public telephone exchange switching system has been approved and selected by telephone administrations in Australia, Denmark, Finland, France, Kuwait, The Netherlands, Panama, Saudi Arabia, Spain, Sweden and Yugoslavia.

tions now have access to systems offering more and better facilities than ever before. As a result, new demands and new markets are opening up even in industrialized countries where the need for basic telephone service has already been largely met.

On the one hand, the new sophisticated technology offers tremendous advantages to both administrations and subscribers.

On the other hand are the huge investments involved and the pressures to keep costs at a minimum. There is also the fact that for developed countries existing equipment defines the technical, operational and financial environment into which new equipment is introduced.

For most administrations, however, the advantages of the new technology are such that the main dilemma is not whether to introduce it, but how to gain the fullest possible freedom to plan and control its rate of introduction and penetration into their networks.

System capability

Full awareness and understanding of the dilemmas and problems of administrations is a prime requirement for manufacturers.

Only then it is possible to market the right systems at the right time to give administrations the planning flexibility they need.

Ericsson's unique AXE switching system and the new DIAVOX family of telephone instruments and systems are two products developed in full awareness and anticipation of administrations' needs.

Among its many advantages, for example, AXE offers a choice of analogue or digital switches. It thus not only provides administrations with unequalled freedom in planning for maximum network economy, but also provides "future proofing".

In the new DIAVOX family, the modular design approach not only ensures minimization of total cost, but also makes provision for the addition of future technical developments.

"Supersystem" capability

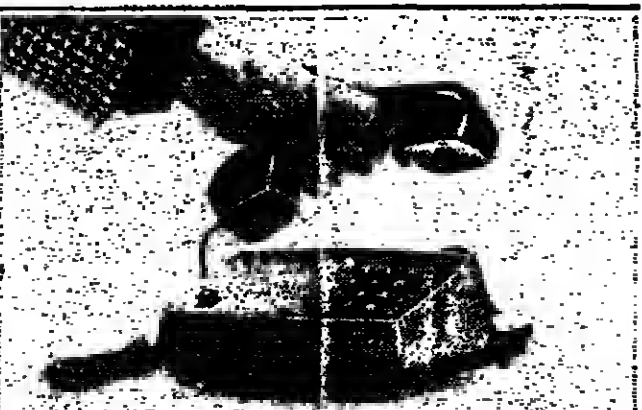
With the transition in telecommunications technology, new skills have to be built up.

Long-term commitments on the part of suppliers, always important, have become even more vital. Particularly in countries still at a comparatively early stage in the build-up of their telecommunications systems.

The transfer of technology, knowhow and skills has become as important as part of long-term customer relationships as the selling of the hardware itself. Local manufacturing also becomes an important consideration.

This means interworking with customers not only at the system level, but at the "supersystem" level as well.

It means the willingness and capacity to take part in network planning, system interwork, operation and maintenance procedures, staff planning, economic analysis and administrative procedures and, not infrequently where long-term capital may be tied up for extended periods of time, participation in investment planning.



DIAVOX—DBA 100—is more than a new telephone. It is a complete new approach to telephones. More than 400,000 have been ordered by Saudi Arabia along with AXE switching system.

It means installing and commissioning support and planning support for future development.

It means comprehensive training capabilities, complete documentation, and in general readily available technical support.

It means advanced research and development facilities designed to meet or anticipate the growing needs of customers around the world.

Not least important, it means keeping to delivery schedules.

Doing it the hard way

At Ericsson, we've developed our system and "supersystem" capabilities the hard way.

No diversification.

No conglomeration.

But a lot of hard work and attention to detail specializing in what we know best... the telecommunications business.

As a result, we are today one of the world's major telecommunications manufacturing groups with more than 70,000 people worldwide, some 70 factories in 15 countries, operations in more than 100 countries and annual sales in 1977 exceeding 880 million pounds.

We're also one of the few—very few—organizations with the across-the-board capacity, knowhow and experience to design, manufacture and install complete telecommunications and telecommunications-related packages virtually anywhere in the world.



ARM transit exchange, Mollison International Switching Centre, London. The ARM first stage of the Thames International Switching Centre, London, is scheduled to go into service this year, with the AXE system second stage scheduled to go into service in 1979. A significant part of the equipment for these exchanges was manufactured in Thom-Ericsson's plant at Semtörpe, South Humberide.

For details, write to: Thom-Ericsson Telecommunications Ltd., Horsham, Sussex, RH13 5QF or group world headquarters, Telefon AB LM Ericsson, S-126 25 Stockholm, Sweden.



The Ericsson Group
Partners in telecommunications progress worldwide

A new medium brings the message

by Peter Fletcher

By this time next year the British will be able to do something that no other nation can. They will have available—in their homes and offices—a public utility service which will be capable of meeting almost all their needs for information.

It will be randomly selectable and accessible on demand, and be designed to help them with their work or their leisure.

It will be a new communications medium. The British will be the first to use a public service Viewdata system.

Viewdata is one of two techniques—both British in origin—designed to allow the generation, storage, transmission and reception of personalized data. The other technique is known generally as Teletext and is used by the television broadcasting agencies—the BBC and the ITV companies. Both techniques make use of a modified television receiver to display text and simplified graphics to communicate their messages.

Although the two systems were invented independently, in the case of Viewdata, the Post Office, quickly realized the advantage of adopting a common standard for the display format. As a result both systems use the same type style, the same layout of characters on a page and the same technique for graphics design, so that the user the display on his screen is much the same whether watching Viewdata or Teletext.

However, there the similarity between the two systems ends. Teletext is received by way of the television set's aerial, intermixed with the normal television signal. It is impresseo on to a few of the 625 lines which go to make up the television picture. It is therefore a broadcast system and as such cannot easily be adapted to the needs of a specific, individual user.

Viewdata on the other hand is received as an audio signal comprising a number of tones which can be transmitted along conventional domestic telephone wires. Use can therefore be made of the complex and enormous public telephone network which the Post Office has built up over the past few generations for access to the computers on which the information is stored.

The Viewdata-adapted television receiver then becomes effectively a complex telephone instrument which, connected into the telephone network can correspond with the data storage and control computers. In effect it allows its user to hold a "conversation" with the computer, the human operator using a simple key-pad to talk to the machine, and the machine answering with written information on the screen.

In this way the user can tell the computer exactly which bits of information he wants and can call pages out of the machine in any order he requires. And not only can the user retrieve information previously constructed and stored, but in a limited way he can also send his own information to the machine for storage and subsequent retrieval by a third party. In other words, using the jargon of the industry, the Viewdata system is fully "interactive".

The computer industry and its customers have been extracting data from a computer "database" by way of a telephone wire and displaying them on a television tube for many years. What is new, however, is the use of a basic domestic telephone network rather than an expensive and specialized visual display unit (VDU) connected to a plain ordinary telephone system (POTS) with all the implications of routing calls through several telephone exchanges, rather than specially installed direct data lines, and making the data stored in the database accessible by anyone who cares to buy a terminal rather than restricting them to a few specialist users.

The result has been the need for television manufacturers to develop new types of circuitry, and to involve themselves to some extent in the telecommunications industry. For use with Viewdata the television is required to be or the same time a telephone and a device able to convert the computer-like digital signals needed to form the characters it has to display. These are generated by keys on the user's control pad from and into the audio tones for transmission through the telephone network—a function usually performed in data communications systems by a device known as a modem.

The result will be a terminal which on the press of a single button—

rather like another channel selector—automatically dial the number of the Viewdata computer centre, recognize the answering signal from the computer, reveal its own individual identity to the machine and when correct is established produce a display which a human being can read.

In this form it will plug directly into a standard telephone jack socket. However, until the industry succeeds in miniaturizing the circuitry required for these functions the television industry is unable to fit it satisfactorily into anything but the cabinet of a television set with a large tube. As a result the first Viewdata receivers to become available will be 26in models.

At the same time the industry is taking the opportunity to introduce other new features and most of these sets will have a facility for remote control. This is essential in any case since a user constantly entering instructions to the Viewdata computer will want to be able to do so from the comfort of his armchair. The first of these sets will be available from June although these will be used for a special purpose, and there will be relatively few people able to obtain one. Sets will be in the shops

made and as such are expensive to produce. The domestic 26in sets, for example, cost about £1,400 to make. However, as the service becomes generally available in the first quarter of 1979 and production volumes increase, accordingly, costs will reduce. In the meantime, the service is to be run on a trial basis from June and sets will be placed with people who agree to have their use of the system closely monitored, and to be interviewed at intervals on their reactions to the new medium.

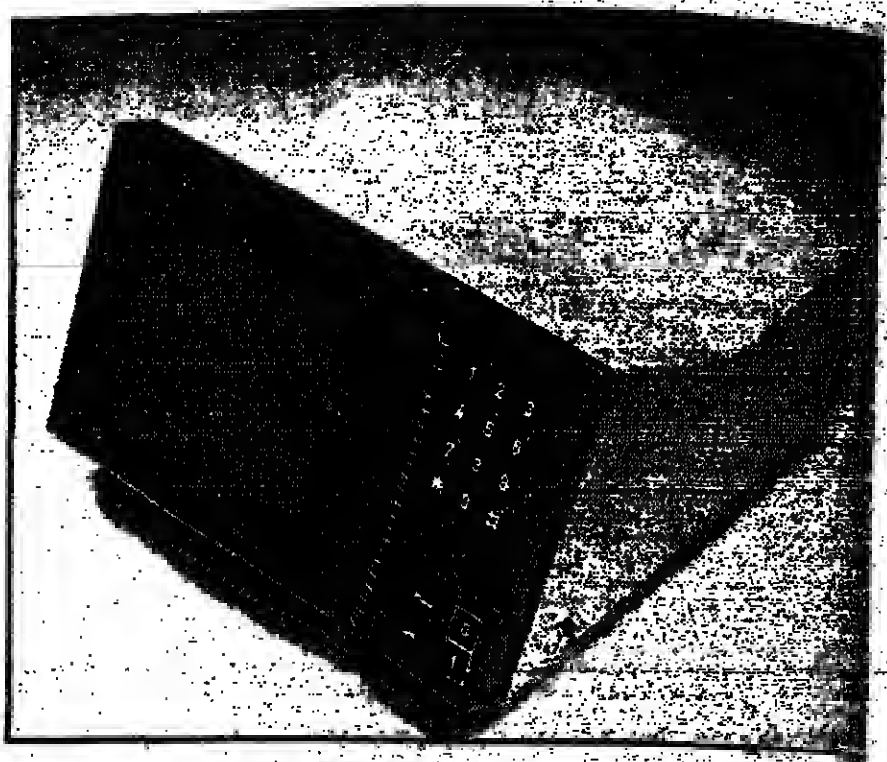
These lucky people will have their sets at a highly subsidized rate—up to £18 a month on rental or between £500 and £700 if they choose to buy. Business people who choose to test the system in black and white will be charged £12 a month for the trial and they will live or work in London, Birmingham or Norwich.

Obviously the hardware is of little use if the information which it will be used to retrieve is not both needed and structured in such a way that the particular piece required by any individual can be readily identified and efficiently accessed.

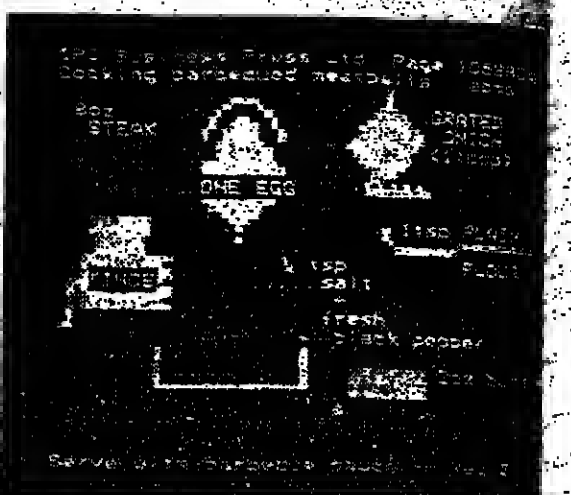
Although the Post Office devised Viewdata and owns the computer data storage centres, it will exercise no control, beyond what is legally required of any publisher, over the information stored in the system. The information will be devised, designed and owned by the third group involved in the project known as Information Providers.

Thus, in the same way that a user of the public Viewdata service will buy or rent his terminal from his local television retailer, a user of information from the system will be a personal deal with the provider of the information. Each page or "frame" of information will be charged for as a rate set by the information provider who owns it. The price will be shown on each frame and will vary from a true cost to the use of zero to an upper limit depending on the value the information provider believes users will place on specialized information.

Prices will be adjustable to tens of a penny. This money will be collected for



A specially developed businessman's Viewdata terminal soon to enter pilot production. Made by Standard Telephones & Cables, it has a 7in screen. Right: simple graphics can be used to construct trend graphs, or to present simple recipes in a novel manner for the user at home.



The variety of information which will be available—even for the trial service—can be gauged from the fact that more than 90 organizations have contracted with the Post Office for the storage of their information. They extend from publishers of magazines and newspapers, to Government departments, local authorities, non-profit-making organizations such as the Sports Council, to mail order companies, advertising agencies, financial institutions and even a few companies specially set up to provide Viewdata services.

The author is Viewdata manager, IPC Business Press.

Jaeger-Waldmann

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When only the phone knows where to go

by Vaysey

partly to establish whether the heavy process can be implemented by the right. For commercial purposes the documentation support aids of telecommunications through telex, facsimile and computer file retrieval are now seen as essential to competitive trading.

If telecommunications uses signals—the children of electricity marshalled into neat columns by dedicated electronic engineers—to convey information, then the use of telecommunications can be in the public mind to serve, as it is in the case of inter-connection.

Part of this study phenomenon is inclined to offend people. The analysis of telephone traffic, for example, can cause as much outrage among middle managers as the "spy-in-the-cab" technique does among lorry drivers in the United Kingdom. A proper understanding of the basis for information system design is an essential starting point for information studies, as well as a barefoot of fact and communications abilities among those attempting to run the design process.

Part of the study, therefore, has to establish whether there is a reasonable alignment between each departmental aim and the overall aim of the organization. Doubt on this topic has led to one multinational organization being caricatured as "30,000 guys working for themselves" in the past. But even all the major groups involved with establishing the pattern of information usage within a company know what is needed: the increased pace

of technological change makes it difficult to select the right product.

For example, the six minutes to transmit by facsimile an A4 document is being complemented by a new range of two-minute telex units. ITT will market such a product in Europe soon, by buying from an electronics subsidiary of the giant Exxon corporation, which is better known in the United Kingdom for its Esso product promotion.

When firms which have the financial muscle of Exxon take up telecommunications design as a pastime, it is likely to startle the relatively slow-moving designer of information systems. At present most users design such systems to match major changes in the way an organization is put together, which gives an average cycle of five to 10 years for decision making.

Future decisions may be more heavily influenced by the obsolescence of installed telecommunications products.

If there were any lingering doubts about the pace of change of telecommunications in the office they must have been dispelled by the recent announcement from the Post Office that the Viewdata service is to be released to the public earlier than originally expected.

Although the Viewdata service has been presented by the media as a friendly computer terminal in the domestic living room displaying the colour television set, the most eager users of it are likely to be offices using black-and-white sets for information gathering, message sending and

marketing operations. The selling of goods through Viewdata and linking inventory to Access and Barclay card references may prove to be a turning point in retailing practice and the public sight of comprehensive networks for moving money about.

Some of the telex and Viewdata systems are to be harmonized there is a fundamental rethink being forced on office message habits. But as well as being involved in a major revolution in using and studying information, the telecommunications industry is also running small revolutions in product design down upon the office buyer of equipment. Much of the redesign of telephony equipment is aimed at increasing versatility and reliability of apparently conventional—and cheap—products which are widely liked at present. ITT has recently published a design analysis of the Novakay telephone key system. The United Kingdom part of ITT Standard Telephones & Cables decided that putting three external lines and 10 stations together via a central switching device could be done with a single wiring scheme. The design results in a combined internal and external telephone system for the myriad of small businesses and departmental groups, which is certainly going to do away with the creaking unreliability of most multi-line systems of today. Electronics experts will note that the product is not a single room idea of computer products, but that it harnesses ideas so that every just use a better desk telephone set. There are plenty of such

internally revamped products in the pipeline of telecommunications design and the Post Office has to face the daunting prospect of accepting this stream of products and filtering out flaws.

In the past the Post Office itself has been able to decide on rental policies for equipment obtained through it without fear of obsolescence upsetting many of its basic financial calculations. By expanding its services and approving equipment from its suppliers' continuing new design ideas it has considerably complicated its pricing mechanisms for rental.

All of these matters point to the need for small businesses to ensure their interests are not overlooked. There is a danger that ITT and IBM and Exco may consult with the Post Office without adequate regard for the adaptability of general business. Computer users within offices has not progressed smoothly, but it has been driven by highly polished systems selling of data handling products.

As the office functions of communicating and computing overlap more and more it would be a pity to grind the business user between the pricing mills of the Post Office on the one hand, and the selling ambitions of the office equipment industry on the other. Each individual business needs to study its telecommunications needs with care, collectively, they must learn to protect their interests in the highest councils of the gargantuan service organizations which supply these products.

Cost and efficiency guided North Sea choice

Raggett

choice might be made by the existing communications can the Scottish and oil production located at a distance of less than 150 miles in the North Sea, too difficult. In fact, technology provide an almost solution to most problems.

It cannot provide capital investment in many such systems. The technology need a of information from telephone, computers, high-speed data links to facilitate it. They also use these sources clock and with it, it provided a adequate link for each channel and a different channel, caused by propagation difficulties over distances of 100 miles. How can reliability of such links be adequate for the

anel capacity and facilities by the production. Microwave line radio systems, in the unit and widely used stance wideband systems, were able for the main shore links.

maintained two other the use of or the use of a beam of propagation as tropospheric scatter links would ideal for the oil in the early 1970s, communication links being seriously there was no suitable available. The establishing a satellite for the exclusive oil industry were and the time he planned Euro

monetization strategy ahead, so the by BP and Phillips to tropospheric

heric scattering of transmission terminal is not necessary for every production

for 100 km to 500 km. The equipment used is similar in many ways to the conventional radio relay microwave system, although many refinements have been built in to handle the differences in propagation characteristics. The transmission is concentrated into a one degree beam which travels in a straight path similar to a ray of light.

In line of sight systems, the receiving aerial is directly illuminated by the beam from the transmitter, but with over-the-horizon links the energy received is dependent on the forward scattering effect caused by turbulence in the troposphere. Any fading is overcome by providing more than one path, either two or four. Because the fading is non-related in the respective paths the chance of fades coinciding is extremely remote. Each path in a diversity system has its own receiver chain, the outputs of which are combined to provide the best output from the signals received.

The performance of tropospheric scatter systems has been found to be equal to those of microwave systems, meeting the required performance for telephone calls for 99.9 per cent and for data for 99.98 per cent of the time. This, in practical terms, means that the link falls below the specified standard on average about nine minutes a month. The first two tropospheric links specified were done so by individual oil companies. British Petroleum established a link between its Forties field and Brimmond Hill near Aberdeen in June 1975 and Phillips from Teesside to its Ekofisk field and pipeline pumping stations.

Meanwhile, seeing the potential demand for tropospheric links to the new fields being discovered, the Post Office arrived on the scene and set about providing shore terminals to serve new oil fields in the sectors to the west of the Shetlands and to the east of Scotland. Marconi-supplied stations were established at Scousburgh in the Shetlands and at Mormond Hill near Fraserburgh. An additional link was also established between Scousburgh and Mormond Hill, a link eventually to be replaced by a line-of-sight microwave link by way of the Orkneys. From these stations the oilfields have access to national and international voice, telex and data networks.

Tropospheric scatter systems can handle telephone channel capacities of any multiple of 12 channel groups from 12 to 132 channels and the Post Office leases 12 channel blocks to the oil companies.

Because of this high capacity a tropospheric scatter terminal is not necessary for every production

platform and careful planning has been carried out to link groups of platforms by line-of-sight microwave into a "master" platform with the trans-horizon link.

To improve reliability further, two separate tropospheric scatter paths are provided from land to a selected pair of platforms 20km to 50km. These platforms are then linked to each other by line-of-sight microwave which completes a triangulation for alternate path operation. Other platforms near the selected pair are connected to the system and thence to the shore, by local line-of-sight links.

Links from Scousburgh have been provided to the Thistle (BNOC), Frigg (Total) and Beryl (Mobil) fields and from Mormond Hill to Piper (Occidental) and Total's pumping station on the pipeline from Frigg. The tropospheric scatter systems on Ninian (Burmah) and Cormorant (Shell) will be commissioned later this year operating into Scousburgh.

In the period up to 1980, line-of-sight microwave will link the Dunlin and Brent fields into Cormorant; the Tarrair field into Piper; the Murchison field into Thistle; the Inshore Mesa field direct to the shore at Wick; and the Andrew field into the BP Forties link.

By the mid 1980s it is expected that a European communication satellite will be available which will have a spot beam focused on Europe and the North Sea with sufficient energy to allow the use of a relatively small terminal with a three metre diameter fixed aerial.

A transmitter with a power output of as little as 100 watts which will provide multichannel data or voice will come at a fraction of the cost of those used for tropospheric scatter or satellite communication by way of the terrestrial satellites.

However, with investment in tropospheric scatter and line-of-sight radio links already exceeding £10m, there will be no oversight switch-over to satellites when they become available.

Rental costs have been a bone of contention between the oil companies and the Post Office. The Post Office, working on a figure of 6 per cent return on investment, set an initial rental of £120,000 a year for 12 voice circuits over a 10-year period. This figure was subject to increase based on the price index. After much protest and discussion the rental arrangement was changed to £150,000 (based on September, 1975, prices) with an indexation based on 40 per cent for the price index and 50 per cent for the minimum lending rate.

The author is the European editorial director, Telecommunications.

Back to basics in television

by Jim Hutchon

What has happened to broadcasting in Britain since the publication of the Annan report? As Lady Plowden, chairman of the IBA, points out, the answer is nothing.

This could be because there was nothing in the report which would warrant sudden changes either to the structure of the service or to the technology employed. It was intended that it should concentrate on the next 15 years of broadcasting, so one might not expect too much to happen in one year.

None the less, external forces are pressing on a number of fronts. Answers are required to questions which many expected the Annan committee to resolve. In less than two years, an international conference is to review all uses to which the entire radio spectrum is put. Even while the Annan committee is sitting, another international conference was preparing plans for direct satellite broadcasting into homes.

For many, the answers to questions on the future of broadcasting, and especially television broadcasting, lie in the technology which can be applied now, and that technology which is seen to be feasible now and can be applied in the future.

For those seeking clues to that technology, the Annan report seems to be a singularly arid region for exploration.

For instance: "We do not foresee in the 15 years ahead the possibility of financing any major technological development which will change the face of broadcasting".

Such a statement highlights a fundamental flaw in the committee's view of electronic technology, where development almost invariably reduces the costs in any area in which it is applied, including the cost of its own continuing development.

An example of this was given by Dr. Boris Townsend, the IBA's head of engineering information, in a recent lecture. Just before the war, the flickering, fading greenish television set cost about £70 and a hardly more reliable Austin 7 cost about £100. Despite almost equivalent improvements in reliability and performance, the bright and stable, black and white television set still costs about £70 compared with the Mini's £2,000.

If Annan offers few clues to the future technology of broadcasting, where do we seek?

Clearly those who are responsible for filling our screens night after night have had more than a passing thought about what they must be doing to make the fullest use of the great strides which the technology makes, to keep their costs within reason while improving the service they provide.

Both the BBC and the IBA seem convinced that in the near future the television screen in the average household will be about two metres wide and a metre high. And, adapting the display technology which has been successful in calculators and digital watches, it will be almost flat.

The author is news editor, to arrive conveniently at Electronics Weekly.

this point, however, requires a fundamental shift in design back through the television set, back through the aerial and transmission medium, back through the transmitter and the chain of equipment in the studio—back almost to the television camera itself.

The change in design philosophy is required to produce equipment which does not handle the signals from the camera as electrical analogues of the scene, but converts the signals into streams of digital pulses. The difference is that between an undisciplined, barely controllable rabbit, and an efficient, well-drilled corps.

In television operations, much of the electronic organization is taken up with trying to control the rabbit, and could be largely dispensed with under a corps regime. Rabbit signals arrive at the receiver aerial worn out by the long journey and not bearing much resemblance to those that started out. They then have to be gently nursed through the rest of the journey to the screen. Corps signals, on the other hand, march through strongly, unaffected by noise en route, and arrive at the screen as clear as when they set off.

Such a reorganization does, however, mean that almost every single item of equipment between camera and viewer has to be redesigned. This may seem rather drastic just to get a large flat screen that nobody seems all that keen on.

The benefits go beyond this. Apart from being able to reduce progressively the costs of broadcasting, digital broadcasting does bring improved reception under adverse conditions and in fringe areas.


It also enables the broadcaster to do a lot of clever processing much more easily—such as eliminating full size scenery by superimposing actors on to scenery models or pictures, and enabling transmissions to be easily "swapped" between standards pertaining in other countries.

The most immediate benefits of going digital, however, are to the receiver itself. There are many designs which will digitize signals in the prototype stage as they appear at the receiver aerial. In time, the vastly reduced organization necessary within the set must bring down the cost to the householder.

It is also a prerequisite for using the domestic television as a computer visual display unit—for the Ceefax and Oracle news data transmissions emanating from the broadcasters, as well as the Post Office's Viewdata service which goes into public service next year.

The home of the future is going to revolve around this computer centre—from games to household accounts, shopping, doing programmes at scheduled times and then replaying at will. All of these are, of course, going to eat into the money saved by the reduced cost of the set. But it may be that the money is being employed in a more useful manner.

The author is news editor, to arrive conveniently at Electronics Weekly.



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Wavelength to the world

by Penny Taylor

On January 3, 1938, the BBC beamed its first foreign-language programme across Europe. It was a 25-minute programme in Arabic—conceived as a riposte against anti-British radio propaganda emanating from the Axis powers to the Arab world.

Those 25 minutes daily in Arabic grew into the extensive BBC External Services broadcasting organization which, on January 3 this year—the fortieth anniversary of the first Arabic programme—was broadcast to the world in English and 38 other languages for more than a hundred hours a day.

The BBC External Services is a generic title which includes the BBC World Service, broadcast in English and 38 other languages in the vernacular.

It is worth listing them to realize the polyglot embassies in the offices and corridors of Bush House, the External Services headquarters. Programme hours broadcast each week are given in brackets: English (227), Arabic (63), French (42), Russian (32), Latin-American Spanish (28), German (24), Polish (21), Hungarian (18), Portuguese for Brazil (15), Hindi (15), Czech (14), Romanian and Serbo-Croat (14), Bulgarian (12), Standard Chinese (10), Greek (10), Persian, Urdu, Indonesian, Vietnamese and Portuguese (8), Finnish (8), Bengali (8), Italian, Spanish, Turkish, Slovak, Hansa, Swahili, Burmese, Japanese and Thai (7), Somali and Cantonese (5), Slovene (3), Malay (3), Tamil (3), Nepali (3) and Maltese (3).

Programmes in all these languages are designed to give news, reports of world events and a broad picture of British life and thought.

The BBC jealously guards the editorial independence of its newsroom and, thanks to a reputation for objectivity painstakingly built up over the years, the External Services provide a global audience of 70 million regular listeners with a multi-lingual service of hard international news as seen from London.

Many regular listeners live in countries where the national news bulletins are controlled, censored or manipulated. Sir Michael Swann, BBC chairman, says that critics

of the External Services accuse them of being a means of reinforcing diplomacy in the short term and of passing messages in the select few.

"Such an aim is not part of the BBC's external broadcasting effort as we see it—though it could be made so, of course. Most of the countries which go in for external broadcasting do just this. I believe that the pursuit of short-term political ends is simply not compatible with being believed and trusted as a conveyor of truthful and unbiased news and information. We have always held this to be our foremost purpose."

Reports about Britain reflect British life "warts and all", Sir Michael says. "The reflection must be true—both the good and the bad. If not, it slides off into propaganda and ceases to be believable."

The BBC can quote some impressive examples to prove the chairman's point. Those working for the Arabic service during the Suez crisis told their listeners that the invasion of Suez did not have the support in Britain the Government would have liked to believe.

Government pressure insisted that the BBC should speak in what it considered to be the national interest. The BBC persevered—despite saying baldly: "For a month or two, the path between Bush House and Whitehall was paved with the hottest bricks in the world."

The Arabic service kept its integrity with its listeners—only to run into trouble during the six-day Arab-Israeli war. Accurate reporting of Arab defeats left listeners with strong feelings of resentment but, after a short while, with the uncomfortable feeling that the BBC had been right, and that their own broadcasting stations had been wrong.

Now, in 1978, the Arabic Service broadcasts about 30,000 words daily to an audience stretching over four time zones. It is estimated that 22 per cent of the population of Kuwait, 40 per cent of Lebanon and 30 per cent of the adults in Damman and Jiddah in Saudi Arabia are regular listeners to the BBC.

The service receives about 40,000 letters annually from its listeners on a variety of subjects—from the serious to the perplexed. A listener in Tunisia wrote plaintively in 1977: "Is your signal

weak because so many people are listening to it that there is not enough to go around?"

How do these signals "go around" the globe? The technicalities are daunting, and international wavebands are full of overflows. Britain broadcasts 708 hours a week in 39 languages and, on any day in the year, the External Services use 130 separate frequencies.

Other countries' external services are also using the international wavebands—Russia, China, West Germany and the United States each broadcasting between two and three times as much as Britain.

External Services programmes are beamed from Bush House with 70 high-power transmitters scattered over 10 major transmitting sites. Four transmitting stations in Britain and five large relay stations in Cyprus, Antigua, Ascension Island, Saudi Arabia and Singapore push the BBC signals to their worldwide audience.

Broadcasting by way of satellites is growing technically more feasible but political and financial constraints raise problems and rule out satellite transmissions for the time being.

Financial constraints and the forthcoming report on the controversial Central Policy Review Staff ("think tank") recommendations which, last year, suggested swinging cuts to the External Services output and organization, are worrying the BBC.

The External Services—including the monitoring service which reports on foreign radio broadcasts—are financed by annual parliamentary grants in aid. Substantial financial cut-backs in both operating and capital expenditure have already been put into effect.

Sir Michael Swann sums up the BBC's position: "If one does something conspicuously well—and vast audiences all over the world are in no doubt that we do—then we should concentrate on this, regardless of the difficulties."

Mr Gerard Mansell, the BBC's deputy director-general, commenting on the think tank's proposal to halve the time spent on the air by the Arabic service, said: "A cut like this would deny a demanding audience of a service it has come to expect, enjoy—and alternatives which it might seek elsewhere."

by Pearce Wright

One of the most fascinating technical facets of the communications industry has been a continuing competition for 50 years between radio systems and cables as a means of carrying messages across the world, and competition between the two methods seems set to continue for the next 50 years. This rivalry between two types of technology has erupted in a public squabble within the industry over plans for a new transatlantic telecommunications link.

Agreement looked certain, until last December, over proposals for a cable that would carry the equivalent of 5,500 telephone calls between America and Europe. Projects of this scale are agreed collectively with their five United States counterparts had accepted the idea to maintain the balance between the development of satellite communications services and those provided by cable across the Atlantic.

There are sound technical arguments for maintaining the expansion of the two forms of communication at about an equal pace. However, formal proposals to install a circuit to be called TAT-7 were rejected by the American Federal Communications Commission in preference to the use of satellite links.

The politics of communications has been fraught with this sort of confrontation since Marconi invented the "wireless" method of sending messages. The satellite is merely the latest manifestation of transmitting signals by radio waves. Competitions between the radio and cable technologies has been responsible for holding the costs of international telex and telephone calls to a level that no other industry can claim to have done for its goods or services. The price of £1 a minute for a transatlantic telephone call is the same as it was in 1938.

More than half of all international telephone calls between Britain and rest of the world go by undersea communications circuits. Not surprisingly the North Atlantic carries the heaviest load, hence the interest in the outcome of the argument about TAT-7, which would be the ninth submarine telephone link from Europe across that ocean. It would also have a much greater capacity than any predecessor.

Because it lacks the glamour of the satellite business, the manufacture of cables has become regarded as a fairly simple and old-fashioned practice. In fact the design, development and production of modern underwater cables is probably a more exacting technology than any other branch of the communications industry.

The technical and economic choice between cable and satellite systems usually involves some sophisticated arguments between the supporters of both technologies. Both have a disadvantage—they are difficult to reach for repair and maintenance.

Recovery of lengths of cable is at least possible. Changes to a satellite have to be made through slight readjustments of its position in orbit, by small motors so that it can be "seen" more clearly from earth stations, and by using control signals to make changes in the electronic system to restore fading circuits.

A revolution in the ease of handling communications satellites will come when the American-managed shuttle programme starts in the 1980s, enabling spacecraft to be repaired in orbit or brought back to earth. No industrial concern could contemplate financing such an enterprise—and so, as with the introduction of the first generation of rockets—built for reasons of strategy and prestige—the satellite of the future will be carried into a new era without much effort on the part of those commercially interested.

The response of the cables faction to the reusable satellite will probably come with an equally notable leap—into fibre optic circuits, allowing telephone, television, computer data and other signals to be carried by the gliding of light through the thickness of a single fibre optic cable.

In theory a single existing cable ship could lay a girdle of fibre optic cable round the world, capable of carrying all existing traffic. The advance in communications afforded by the

shuttle will almost certainly be the stimulus for fibre optic cables over the next decade. As the technology of cable design and production has advanced to give higher capacity circuits the size of the industry has contracted to four suppliers. The United Kingdom has about 50 per cent of the world submarine cable business.

Like the other foreign manufacturers, the company also has an interest in the development of the radio systems aspect of some types of space satellites.

Cables seemed to be on the decline after radio systems became more reliable in the 1930s. But a resurgence in the underwater links occurred in the 1950s when the radio spectrum became increasingly crowded. Several technical strides were necessary, however, for the cable to compete with the radio circuits in a business where the main objective is to keep the cost of making a telephone call down. For the cable this meant squeezing more messages along the line.

The solution to this need came with advances in the device called a repeater, which is spliced into a cable every few miles. The most recent cable laid between Europe and America has 633 repeaters made by STC. These units, which look like small torpedoes, contain electronic amplifiers to maintain a voice message or any other signal at the correct level. The invention of the transistor allowed these amplifiers to be made smaller, reliably and with a great saving in the speed of laying a cable.

However, the cable carries both a telephone call and a very high voltage to drive the signal across the Atlantic. Both the voice and the power signals go down the same line. Since the transistor amplifiers would be damaged by a high voltage, each repeater contains complicated electronic filter to separate the voice and the power signals at each stage of processing across the Atlantic.

The basic specification for a cable circuit includes a minimum life of 25 years. Thus the overriding consideration is one of reliability. Therefore the design of repeaters such as those are backed by an intensive research programme.



In front of one of the giant aerials at the Post Office earth station at Goonhilly in Cornwall, Mr George Banner, station manager, holds a scale model of one of the orbiting satellites which can handle up to 6,000 telephone calls.

Fighting fires with Figaro

A unique communications system has been ordered by the Home Office for the fire services. The equipment has been tested for three years in a number of large buildings and installations—including a nuclear power station, a missile frigate in harbour, an underground railway system, and tower block buildings—in which rescue men could be in great danger without efficient communications apparatus.

Indeed, the idea for the Figaro system was prompted by incidents in which firemen's lives were put at great risk in conditions in which existing communications equipment was inadequate. The new design has potential applications for other emergency services, but it could also open new uses for special short-range communications networks built on this novel method of transmitting signals. For the Figaro scheme allows transmission in conditions in which more conventional radio signals fail to penetrate rock, water, soil or metal barriers standing between a member of an emergency rescue or fighting crew and the control centre.

The specification for the new radio system was produced by the directorate of telecommunications at the Home Office in conjunction with a joint research committee representing fire brigades. Among other characteristics the apparatus has to withstand rough handling, beat, noise, and to be small enough for use with breathing apparatus and free from interference.

The main difficulty was finding a suitable frequency for this type of work that would meet the requirements and also be clear of the existing crowded channels on which mobile and two-way personal radio operate. The answer came from the Plessey company which had done investigations showing a suitable "window" through these barriers for frequencies between 10 MHz (megahertz) and 15 MHz, with which short range links could be established.

The most suitable frequency for Figaro, chosen from that work, was for a unit to operate at 3 MHz. In tests the fire service and rescue teams had throat microphones and single earpieces in order to make a compact portable device

which could be incorporated with the breathing equipment needed by rescue services in the worst conditions. A demonstration of Figaro will be among the new developments to be presented by Home Office communications groups at the Communications '78 exhibition.

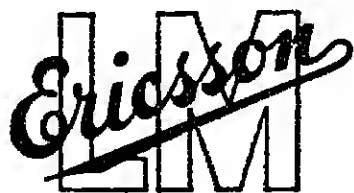
For the most stringent tests, a number of large fire brigades proposed installations that might form a high potential risk. For instance, in the Avon area a trial was made with the Central Electricity Generating Board of tackling a blaze at a nuclear power station. By its very nature, a power station has large amounts of electricity, bulky anti-radiation structures and deep basements. All of these objects present difficulties by forming a screen against more conventional two-way radio communications links.

In that exercise communication channels were established to the most inaccessible places, to which contact could not be made by using existing uhf (ultra high frequency) and vhf (very high frequency) personal radio sets. The technical trick with Figaro is the choice of a radio signal which can be induced to travel along the sort of large water pipes, cable ducts and walls that would normally present a barrier to radio transmission. This type of barrier is perhaps more commonly encountered in new large buildings built on steel girder frames.

Efficiency of communication between the base station and fireman depends in some circumstances on how the aerial of the transmitter is placed on the fire ground though the aerial is as easy to erect as a tripod for a camera. In the best conditions from the standpoint of radio transmission, distances of more than a mile can be covered adequately with Figaro. But at some times the working distance for effective communication is in the range of 500 to 600 yd. On the other hand, other types of personal radio communication ceased to operate after distances of 40yd to 150yd.

One of the most tiresome problems in the design of the equipment was not connected directly to the transmission and reception of radio signals; it was the development of a headset to switch on and off without a fireman using his hands. This was the subject of a separate project.

P.W.



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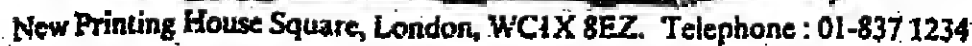
Communication can be defined as the act of imparting news or information. In order to communicate effectively therefore, one needs to be in possession of all available facts.

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I spoke today to a German friend of mine, who was born in what is now E Germany, and is now a British citizen. I asked him whether he would support the introduction of an identity card system in this country. His reply was "Yes--100 per cent."

Yours faithfully,
 W. AL. JONES PDWELL,
 11 Elm Street,
 Brecon,
 Powys,
 March 22.

John
Chartered

THE TIMES

BUSINESS NEWS

Foord
surveyors

Bank of England supports sterling heavily to stem downward pressure

By Caroline Atkinson

Sterling was heavily supported by the Bank of England in the foreign exchange market yesterday. The intervention seemed to be aimed partly at convincing the markets that the Government does not intend to encourage a drop in sterling.

Some estimates of the amount spent by the Bank yesterday ranged as high as £250m, although other dealers put it lower than this.

The official purchases helped to boost sterling against the weaker dollar. The pound closed at \$1.368, 30 points higher than on Friday.

In effective, three-weighted, terms the pound finished the day at 61.8 per cent of its 1971 value, the same level as on Friday. This is the lowest it has touched since August last year.

There has been a steady build-up of pressure on sterling over the last four weeks. The pound has fallen by more than 5 per cent against a basket of currencies and by 3 per cent against the dollar.

Market worries about the prospects for Britain's trade

balance have been one reason for the weakness. Another has been speculation that the Government would be quite happy to see the rate drop.

For much of March the Bank appeared to stand on the sidelines while the pound fell. With the market becoming hushier and with no sign of a let-up in the pressure on sterling, the Government has stepped in to help, or at least slow down, the slide.

Officials believe that much of the selling of the past few days has been speculative and could easily be reversed. For this reason they believe that it is justifiable to use some of Britain's reserves to prop up the pound and counteract the speculation.

The March reserves total, to be published today, will not be affected by the most recent official intervention. However, it is likely that it will show a fall in the reserves from their \$20,701m level at the end of February.

The Government's attitude to the dollar's recent weakness is ambivalent. On the one hand it does not want a sterling fall to threaten its inflation target. On the other hand a lower pound helps British industry to compete internationally.

The dollar dropped further on the opening of business in Europe yesterday although officials' intervention in Germany, Switzerland, and possibly in the United States as well, helped it to recover later in the day.

Its closing levels against most major currencies were little changed from Friday when it dropped sharply on the news of the massive United States trade deficit in February.

The Canadian dollar fell to a new post-war low against the United States dollar of 87.925 yesterday.

Peter Norman writes from Bonn: Yesterday's talks between Chancellor Helmut Schmidt of West Germany and President Giscard d'Estaing of France were exclusively concerned with currency problems. Herr Klaus Böhling, the Bonn Government spokesman, disclosed today.

It has been suggested in Bonn that Herr Schmidt may have suggested a strengthening of the European joint currency float as one method of protecting Europe from the effects of the dollar's decline on foreign exchange markets.

Two-way trade touches sensitive areas of government policy Britain to place shipbuilding and oilrig orders with Finland in return for aircraft contract

By Peter Hill and Edward Townsend

Two important deals which could mean millions of pounds of work for Finnish industry, and be used to help to offset Britain's sale of jet trainers to Finland, are likely to be settled within the next few weeks.

One of the deals concerns the construction of a roll-on/roll-off ship for the United Baltic Corporation, based in London. Negotiations have also taken place on the possibility of a Finnish-built oil exploration rig being purchased by a consortium including British Petroleum.

Both negotiations touch on sensitive areas of government policy. The Department of Energy and the Offshore Supplies Office have been anxious to ensure that as much as possible of the hardware for Britain's North Sea business is built in the United Kingdom.

Similarly, the Department of Industry and British Shipbuilders have been attempting to ensure that United Kingdom yards—while facing a bleak future like other yards throughout the world—should obtain as much work as possible from United Kingdom shipping companies.

The unique contract to supply Finland with the Hawker Siddeley Hawk trainer was signed last December. Under the

terms, British Aerospace undertook to sell the equivalent value (£128m) of Finnish manufactured goods in Britain or other countries.

This deal aroused considerable controversy in Finland and negotiations on its implementation have been carried on in a low key in Britain because of political sensitivity.

The negotiations on the Ro-Ro ship for United Baltic with Finnish shipbuilders Rauma-Repoli have, it is understood, reached an advanced stage.

Finnish shipyards are as desperate for orders as those in Britain, but unlike British and European yards, the industry in Finland has received little in the way of state subsidies.

Like other Finnish yards, Rauma has specialised in advanced merchant vessels and has delivered over 20 Ro-Ro ships in the past 10 years. Recently the company developed a new design of Ro-Ro ship of 6,100 tons deadweight.

United Baltic has previously built two ships in Finland for use on services which are operated jointly with Polish Ocean Lines.

The company is believed to have spent nearly two years discussing the possibility of building replacement tonnage with British yards, but it now appears that the

order, along with a similar vessel order from Polish Ocean Lines, will be concluded with Rauma. The value of each of the two ships is likely to be about £5.5m.

In view of the conclusion of the Hawk deal it seems likely that the purchase will be used partially to offset the jet trainer package.

Meanwhile, discussions are taking place between Rauma's oil rig building company and potential buyers of a large exploration rig which is due to be completed at the end of next year.

Negotiations have been taking place between the Stolt Nielsen group of Oslo and Rauma. Over the past few months negotiations have centred on the possibility of the rig being acquired by a consortium of companies including BP.

BP has an interest in Stolt Nielsen following acquisition of a 50 per cent stake in Stolt Tankers and Terminals (Holland).

However, it now appears that BP has withdrawn from active participation on the grounds that it has no immediate requirement for an additional rig.

Certainly at one stage in the negotiations there was discussion of BP's entry in the joint venture being used in the offset deal.

World Bank Americans criticize US policies

From Frank Vogl Washington, April 3

In an unprecedented move, American employees at the World Bank have written directly to President Carter complaining of United States government policies that threaten to undermine international cooperation and seriously weaken the bank.

The views of the staff appear mostly to be shared by Mr Robert McNamara, the bank's President.

The staff suggested in their letter that the United States was striving to force the bank to adopt policies based on domestic political considerations alone, in total violation of the principles outlined at American government insistence in the Bretton Woods agreements that established the bank over 30 years ago.

They claimed that these policies were leading other governments to resort to national, rather than international, approaches on bank policy issues of prime importance.

Their criticisms arise from concern by the staff over United States Congressional attempts to force the bank to adopt American human rights policies and to desist from making loans that would be used in developing countries to stimulate the production of commodities in competition with American products.

The complainants are also the result of Treasury efforts to make drastic cuts in salaries at the bank.

In their letter the American employees say that recent United States policies have shaken their trust in the Government.

In a separate letter to Mr Edward Fried, United States executive director of the bank, they stressed: "We are particularly concerned that the United States government has allowed conditions to develop in which a campaign can be waged against the World Bank, both in Congress and in the press."

"We are afraid that this campaign will endanger the international character of the World Bank and the recognized quality of its work."

In an interview published in the New York Times, the usually diplomatic Mr McNamara directly criticized United States policies towards the bank.

He said: "The effort of one nation to force its parochial views on other nations drawn together in international organizations to pursue common goals is deeply resented. It can only lead to a serious weakening of these organizations."

He added that the United States was alone in adopting such policies.

The Treasury has indicated that it intends to cut the gross salaries of American bank employees by 20 per cent, and the net incomes of non-American bank employees by 5 to 10 per cent.

Mr McNamara stated that most employees were recruited from the private sector, and bank salaries had to be based on pay scales in private enterprise and not on levels that might exist in the civil service.

American employees at the bank say in their letter to Mr Fried: "We hereby petition our Government to desist from sending messages and embassies to the capitals of scores of members of the bank to try to convince or pressure them into following the United States line."

Above all, we urge the United States Administration to resist the constant badgering of the World Bank and its staff by certain members of Congress and its committees."

Yen surges against the dollar as market reacts to US trade deficit

From David Tharp Tokyo, April 3

The yen today reached a new high of 218.15 to the dollar before the Tokyo exchange market closed at 218.20.

As unwavering dollars flooded the exchange, Mr Takeo Fukuda, the Prime Minister, described the international monetary situation as "abnormal" during a debate in Parliament. He added that the yen's appreciation stemmed basically from the dollar's weakness rather than the yen's strength.

Mr Fukuda told an Opposition politician that he intended to talk to President Carter about ways to devise a remedy for the badly shaken currency markets.

The two leaders will meet in Washington next month.

The Bank of Japan stayed away from the exchange market today to leave the determination of the yen-dollar rate to market forces. The exchange opened at 220 to the dollar in morning

trading, 3.40 yen higher than the closing rate on Friday night.

The dollar's decline was not unexpected, and trading was calm for the most part. The sharp drop in the dollar's strength was expected following a United States Commerce Department announcement of a trade deficit of \$22.1bn for February.

The United States trade deficit with Japan for February was \$973m, still close to the record January deficit of \$1.41bn.

Mr Kichiro Miyazawa, director general of the Economic Planning Agency, said today that the yen's upsurge was because of the market's "overreaction" to the trade deficit. He said that such an abnormally fast rise in the yen's value would not last long.

Tokyo industrial and government officials blamed the steady deterioration of the dollar on the United States Government's inability to handle the ever worsening balance of payments position.

The Japanese would increase their imports on an emergency

basis to stem the yen's further appreciation, officials said, but if the Americans did not take adequate steps, Japanese measures would amount to nothing.

"The yen is now actually over-valued," one government official said.

Some major companies have learned to live with the high yen, and are confident they can survive the present dollar-yen fluctuations, but small groups which export for thin profits are expected to face more bankrupcies. Unemployment among these small exporters is also feared.

Today's new yen high means the Japanese currency has appreciated 10 per cent this year on top of a 22.1 per cent rise in value during 1977.

Total revaluation amounts to nearly 40 per cent since December 1971 when the yen rate was 308 to the dollar.

Appreciation is expected to continue until Mr Fukuda's highly publicized 7 per cent growth target is realized, and Japan's current account surplus is reduced to \$6,000m this year.

Burton and Hepworth in drive for larger share of menswear sales

By Patricia Tisdall

A drive to win a larger share of the diminishing men's clothing market is being made by two of the large multiple retail groups.

Burton, largest of the groups, is making an attempt to enter the young men's fashionable clothing sector with a new chain of shops under the Top Man name.

The J. Hepworth chain has linked with Debenhams to open new outlets using the latter's "Hardy Amies" label within department stores.

Burton, which announced the closure of its Jackson's Tailor made-to-measure operation earlier this month, already has two of its new Top Man stores trading. Mr Ralph Heaton, chief executive of the group's retail division, expects to have a total of 40 in operation by Christmas.

Hepworth's first "shop-within-a-shop" opened in Bristol last August. It proved so successful that a second is to start within Debenhams' store in Piccadilly, Manchester, earlier this month. It is understood that negotiations are taking place between the two companies for further similar openings.

Some of the 70 Jackson's stores are being closed as the closure is being assessed by Burton to see if they are suitable for the new Top Man venture.

Other premises will come from elsewhere within the group, which owns Peter Robinson and Top Shop, the more recent young woman's fashion chain, besides its menswear activities.

Hepworth is making use of the Hardy Amies name in its new Debenhams-backed project. An informal link already exists between the two companies through the presence of Mr Eric Crabtree, the former chairman of Debenhams on the Hepworth board.

Although he stepped down as chairman of Debenhams in February, Mr Crabtree remains chairman of Hardy Amies and a director of Debenhams. The Hardy Amies company is owned

by the department store group which licences the label exclusively in the United Kingdom to Hepworth's.

With Top Man, Burton's is hoping to attract younger and more fashion-conscious customers than patronised either the 70 Jackson outlets or the 360 Burton stores.

The new chain will use similar merchandising and management techniques as have been applied to the group's profitable woman's Top Shop chain. A senior group executive describes Top Man as more of a "brother to Top Shop than a son of Burton."

A departure from previous menswear retail policy adopted by Burton, Top Man merchandise buyers will have flexibility to purchase supplies from outside the group.

Mr Halpern said: "The philosophy of Top Man is that it is a retailing organization which can buy from wherever it needs to in order to get the right merchandise at the right price."

Lord Croom (above), who as Sir Douglas Allen was head of the Home Civil Service and Permanent Secretary to the Civil Service Department from 1974 until he retired at the end of last year, is to become an industrial adviser to the Bank of England. He takes up the appointment next Monday, and will complement the activities of Sir Henry Benson, who has been industrial adviser at the Bank since 1975.

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BOC loses merger fight at Airoc

By Christopher Wilkins

Directors of Airoc, the American industrial gases group, have overridden an attempted veto by BOC International voters in favour of a \$600m merger with Martin Marietta Corporation, an aluminium and aerospace group.

After share purchases last week, BOC controls 54 per cent of Airoc.

At a board meeting in the United States yesterday BOC's representatives on the Airoc board attempted to amend Airoc's by-laws so that any action by the directors would have to be unanimous. BOC also proposed to abolish Airoc's executive committee.

The effect of these proposals would have been to make it impossible for Airoc to approve a deal with Martin Marietta against BOC wishes.

But the other directors of Airoc rejected the validity of BOC's move and voted instead to approve a letter of understanding with Martin Marietta to a 550 share bid from Martin Marietta.

However, the bid has been made conditional on the outcome of a lawsuit by Airoc which disputes the validity of an agreement reached last year under which BOC's stake in Airoc was raised from 34 to 49 per cent through the purchase of 1.8 million shares at \$43 a share.

This action is due to be heard next Monday.

Strikes halt jobs for 8,600 at Coventry

By R. W. Shakespeare

More than 8,600 workers in Coventry are already idle because of two big unofficial strikes that have closed the Chrysler car engines plant and the big Rolls-Royce engineering factory in the city. Today another 4,000 workers from a second Rolls-Royce plant at nearby Anstey will be laid off.

Last night some workers from the Rolls-Royce plant in Coventry had occupied the works car park and said that they were prepared to "sit in" until the management met their demands over a new pay claim.

Unless they are quickly settled, both Coventry disputes could have repercussions on other sectors and cause the lay off of many more workers.

At the Chrysler engines plant at Stoke (Coventry) 4,000 men are laid off and all production is at a standstill because of a

strike by 70 forklift truck drivers. They walked out on Friday in support of two of their colleagues who have been disciplined by the management for refusing to operate new flexible working arrangements.

A company spokesman said yesterday: "These arrangements on flexibility are the subject of an agreement with the unions."

The striking drivers are due to meet tomorrow.

At the Rolls-Royce Parkside factory in Coventry 2,600 shop-floor workers are laid off without pay, and another 2,000 employees have been told not to report for work until further notice. The shutdown of the factory, which is largely a teaching workshop for Rolls-Royce's engine operations, follows a breakdown in negotiations on a new pay deal for the manual workers.

Settlement by German metal union

From Peter Norman Bonn, April 3

An agreement between the IG Metall trade union and the employers was finally reached in the early hours of this morning. It should put an end to the industrial dispute that has crippled the metal processing industry in south-west Germany for the last two and a half weeks.

At the end of an all night negotiating session, Herr Franz Steinkühler, the local union leader, and Herr Helmut Pöhl, the chairman of the Baden-Württemberg employers' federation announced that they had settled on a 5 per cent wage increase for the 560,000 metal workers in the area, and safeguards that will prevent workers losing income as a result of jobs being downgraded because of the introduction of new technologies.

The agreement, which is bound to set precedent for the metal industry in other parts of Germany, came after a total of 250 hours of negotiations between the two men and their advisers.

State industries review by Government out tomorrow

By Melvyn Westlake

The long-awaited White Paper on the nationalized industries is scheduled to be published tomorrow. Although it will be the first major review for a decade of the operation of public corporations, and their relationship with Whitehall, it is not expected to contain any radical proposals to change existing arrangements.

It is likely to endorse broadly the philosophy of commercial pricing and financial objectives laid out in the 1967 White Paper, while recognizing the wide diversity that exists among public sector corporations. But the need to meet target rates of return on new investment will be reasserted.

In so far as ministerial relations with the nationalized industries is considered, the main innovation seems likely to be the use in future of more specific, rather than general, directions to the industry boards.

It is probable that such specific directions will have to be

bedged around with conditions. If financial losses result from such instructions, compensation is likely to be offered.

It is certain that the Government will reject some of the key proposals put forward in November, 1976 in a special study of the nationalized industries undertaken by the National Economic Development Office.

Among the most controversial NEDO proposals was one for the establishment of permanent policy councils chaired by independent presidents for each public sector industry.

This recommendation has been strongly criticized because it would result in yet another tier of control. There has been little sympathy in Whitehall for this idea.

This week's White Paper is essentially the Government's response to the NEDO study, which explicitly ruled out direct intervention by the Government in the decisions of corporation boards.

Slowdown fears curb Carter plan

From Frank Vogl Washington, April 3

Mounting fears of a significant slowdown in the United States economy's general growth rate may temper moves being prepared by both the White House and the Federal Reserve Board to reduce the upward trend of prices.

Commerce Department officials fear that the annual rate of real gross national product in the first quarter of this year may have been less than 1 per cent.

President Carter's new anti-inflation proposals, which are likely to be announced in the next couple of days, will probably be largely symbolic.

The Administration does not appear keen to reduce the volume of tax cuts it has proposed or to suggest major reductions in public expenditure.

At the same time it has firmly ruled out wage and price controls or set-backs.

The Fed has in recent days indicated to the markets some willingness for a modest tightening of its policies. The rate for Federal funds has moved up fractionally to around 7 per cent, but the Fed has not allowed the rate to go any higher.

In the markets there are fears of a substantial tightening as the Fed seeks by this means both to curb the dollar and to curb inflation.

These fears have also been based upon the latest money supply figures, showing the sharpest weekly increase so far this year with M1 in the last statement week up by \$2,100m and M2 ahead by \$2,800m.

Both the Washington Post and The New York Times urged the President to take a tough anti-inflation stance in leading editorials today.

The President is thought likely to announce his determination to hold civil service pay rises to below 6 per cent this year, and to ensure that further additions to public spending are not made. He is also likely to start making a more direct effort at curbing business and labour leaders into showing restraint on price and wage increases.

The Administration believes that its strong disinflationist last week of US Steel's plan to raise prices by \$10.50 per ton was effective, with the company announcing today that it would raise prices by a smaller and unspecified amount.

How the markets moved

Rises

Castellfield	3p to 19 1/2p
Dixon D	1p to 8 1/2p
Fremans	1p to 12 1/2p
Grootvlei	4 1/2p to 9 1/2p
Hampshire	8p to 17 1/2p
McNeill Grp	1p to 26p

Falls

Bracken Mines	12p to 7 1/2p
De Beers Ltd	10p to 52 1/2p
De Beers Ltd	20p to 32 1/2p
Randam Van	20p to 31 1/2p
Gl Portland	12p to 17 1/2p
Harmony	15p to 33 1/2p

Equities were subdued.

Gift-edged securities to ground. Dollar premium 100.0 per cent effective rate 43.64 per cent. Sterling gained half-a-cent to \$1.3680 as the effective exchange rate index was at 61.8.

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EEC-China trade pact

Brussels, April 3.—China and the European Economic Community today signed a five-year trade agreement.

Mr K. B. Audersan, the Danish Foreign Minister and President of the EEC's Council of Ministers, said it would be the task of the EEC-China Joint Committee, set up under the agreement, to open up trade possibilities as yet unexploited.

The non-preferential framework agreement commits China

to give "favourable consideration" to EEC exports, according to political sources.

It also requires both sides to do what they can to keep their trade in reasonably balanced.

David Bonavia writes from Hongkong: China's signing of a trade agreement with the EEC will provide no immediate benefits, but in the long term may open up more business to Europe from Japan and continue to freeze the United States out of the China market.

THOMAS WITTER AND COMPANY LIMITED

Manufacturers of Smooth surfaced Floor Coverings, Broadloom Carpets, Bituminised Roofing Felt, Asbestos Felt, Packaging Board, etc.

ENCOURAGING CURRENT PROSPECTS AFTER A DIFFICULT YEAR

The 80th Annual General Meeting of Thomas Witter and Company, Limited, was held on 31st March at Chisley. The following are extracts from the circulated statement of the Chairman, Mr. H. Bowser:

Group pre-tax profits amounted to £878,387 against £1,123,275 last year. Turnover at £23,794,000 was 12.1% better than last year.

The Board recommend the payment of an increased final dividend of 2.4844875p per share, making a total for the year of 3.1444875p which, with its associated tax credit, is equivalent to a gross dividend of 19.0575% (1976-17.325%), being the maximum permitted and leaving a retained profit for the year of £102,876.

The lower profit is the result of a serious loss of production in the course of the year caused by labour problems, not unconnected with the Government's pay policies, which resulted in strikes, go-slows, sit-ins and such-like stoppages. In addition the returns from our subsidiaries in Australia, Ireland and South Africa were most unfavourable. They experienced a very difficult year, adversely affected by political and economic conditions in those countries. Action has been and continues to be taken to do all possible to eliminate future losses, and we now look forward to much better results from these sources.

At home our prospects for the current year, which has begun well, are encouraging. Enquiries and the level of our order books provide good grounds for confidence that the year will produce a significant increase in profits, provided there are no exceptional adverse developments.

Charinco An important investment for charity trustees

Charinco is a common investment fund supervised by an independent body of Trustees. It has been created under a scheme of the Charity Commissioners specifically to help charity trustees look after their fixed interest investments with the maximum efficiency and the minimum worry.

The Record

Charinco completed its second year on 30th November 1977. The price of the income shares had risen from 100.00p to 122.21p and of the accumulation shares to 147.17p. Dividends per share were 1.1p in the first year, and 12.6p in the second year. There were 938 subscribing charities and the total value of the fund was £9,870,110.

The Advantages

- Funds will benefit from day-to-day supervision by an experienced City management team.
- Trustees can either subscribe cash, or transfer suitable existing securities into Charinco.
- A greater diversification of investments can be achieved while administration costs can be lowered.
- The Fund managers will aim gradually to increase capital and income over the years.
- Dividends will be paid gross, quarterly, ensuring a regular flow of income.

For further information please write to The Fund Managers appointed by the Trustees:
Mellies & Co., Members of The Stock Exchange,
15 Moorgate London, EC2R 6AN Telephone 01-636 4121.

FINANCIAL NEWS

Highland Dist to increase price of Famous Grouse blend

The interim results from Highland Distilleries, the Scotch whisky group renowned for "Famous Grouse", show an increase of 18 per cent in pre-tax profits to £1.7m for the six months to February 28.

Sales rose by 35 per cent from the first half of last year, thanks mainly to the continuing progress of the Famous Grouse. However, in view of increased costs, it is intended to raise the price of this blend soon.

To the home trade sales in the calendar year 1977 showed a good increase despite a declining market. In the first three months of 1978 there has been heavy forward buying ahead of expected industry price increases. Orders for new fillings in the current calendar year are just ahead of last year, while actual sales of new and mature whisky are the same.

Time of transition for Yarrow

Up went the turnover of Yarrow from £3.21m to £3.56m in the half-year to December 31. But down went pre-tax profits from £94,000 to £76,000. These figures do not include profits earned by Yarrow (Shipbuilders), since that company and Yarrow (Training) were nationalised on July 1, 1977. So they were not part of the Yarrow group in the latest half-year.

Trading profits and investment income in the second half are expected to be maintained and may even increase. But profit on sales of investments will not be significant. The interim dividend, gross, rises from 2.27p to 2.57p. Last December, Yarrow bought 75

per cent of Ritchie Taylor Engineering (Glasgow) for £360,000. Yarrow is pursuing "several other opportunities" for investment.

BSR waits for upturn in world economy

Any growth this year at BSR will only occur if the major industrial economies act quickly to increase demand, says Mr John Ferguson, chairman, in his annual report. Sales for the sound reproduction division are running slightly behind the comparable period last year, while those in the consumer product division are on an even keel.

Tebbutt deal brings in Mr Knight

For an initial share payment of £150,000 followed by about £100,000 depending upon profits, Tebbutt Group, the Kove Ruid vehicle, is buying Tape Projects and Self-Seal Tape from Tiger Securities. The deal is for shares which will give Tiger 15 per cent of Tebbutt's equity, so Mr Robert Knight, Tiger's chairman, will join the Tebbutt board. Mr Knight, incidentally, became head of the George Surla group in November.

Record half seen at Metatrax

With an extremely strong order book, Metatrax (Holdings) is looking for substantial further progress this year. Mr John Wardle, chairman of this Birmingham-based engineering group, says that in the absence of catastrophe, the results for the first six months of the

current year should be another record.

He views the year as a whole with confidence, although it would be unrealistic to expect the results for the full year to show a dramatic rise like last year's.

Scrip issue as Spirax passes £5m pre-tax

Record results as promised come from Spirax-Sarco Engineering along with the forecast bigger dividend, and a scrip issue for good measure. On turnover 13.5 per cent ahead at £29.26m, pre-tax profits rose by 20.5 per cent to £5.09m last year, the first time £5m has been passed. As predicted, the final payment rises from 5.54p to 7.86p, lifting the total gross dividend from 9.52p to 13.54p. A one-for-one scrip issue is also proposed.

London Sumatra not interested in 150p

London Sumatra Plantations and its financial adviser Robert Fleming yesterday rejected the revised 150p a share takeover offer from McLeod-Sipet. McLeod-Sipet has said that the offer, increased from 110p a share, is the final one. It will not be increased. Yesterday the shares fell 3p to 130p. London Sumatra has put the net asset value of its shares at 27p.

Racal pays £5.35m for second US purchase

By Michael Press

Racal Electronics is to pay £5.35m for Vadic Corporation, a private manufacturer of data communications equipment based in California. The acquisition is being financed by a dollar loan from Barclays Bank International and is intended by Racal to improve the range and marketing of its products.

Vadic specialises in low-speed modems (modulators-demodulators), of which it is the highest private manufacturer in the United States.

Modems are devices which enable digital data to be sent over ordinary telephone lines, and Racal is itself a leading maker of high-speed modems.

Over the past five years Vadic, formed in 1969, has trebled sales to £4.6m in the fiscal year that ended in April, 1977. Pre-tax profits for the same year were £744,000 on assets of £949,000. In the first nine months of Vadic's current financial year sales were £4.5m.

In May last year Racal paid £37m for another United States company, Milgo Electronic, now renamed Racal-Milgo.

Racal is planning to bid for more turnkey contracts, particularly in the security market. Since the purchase of Vadic could considerably strengthen Racal's earnings from next year, the market put the shares up 2p to 212p.

All these securities having been sold, this announcement appears as a matter of record only.

FFI

Finance for Industry Limited
(Incorporated in England under the Companies Acts 1948 to 1967)

£12,000,000

10 per cent. Sterling/U.S. dollar payable Bonds 1989

S. G. Warburg & Co. Ltd.

Banque de Paris et des Pays-Bas

Deutsche Bank
Aktiengesellschaft

Kreditbank S.A. Luxembourgeoise

Salomon Brothers International
LimitedSwiss Bank Corporation (Overseas)
Limited

Westdeutsche Landesbank Girozentrale

Barclays Bank International
LimitedLloyds Bank International
Limited

Midland Bank Group

National Westminster Bank Group

The Royal Bank of Scotland
Limited

South African mines exploration goes on

By Desmond Quigley

Problems posed by continuing high levels of inflation affecting South African mines, and the escalating costs of exploration and development, have been highlighted in several recent annual reports from mining companies in South Africa and elsewhere.

Nevertheless, on the exploration side there are encouraging signs. Union Corporation has all but categorically stated that it has a new uranium and gold mine in the Orange Free State.

In his annual statement, Mr E. Pavitt, chairman of Union

Mr Julian Ogilvie Thompson, chairman of Anglo American Gold, notes that the results of Anglo's exploration in the Eridani-Dunbarveld area are being reviewed. The tone is non-committal, but on the other hand not as pessimistic as when reviewing exploration elsewhere in the Orange Free State.

Meanwhile Anglo is raising R25m and Anglo R40m through the placement of 10 per cent redeemable preference shares either to reduce short-term borrowings and to finance new investment commitments or to finance "ongoing commitments".

At Randfontein Estates the chairman, Mr Bernard Smith, comments that consideration is being given to a further expansion of underground operations through the opening up of the Cooke Number Three area. At Stillfontein the cost of the plant for the treatment of the dumps is put at R60m.

Falaboru lost 6,600 tons of copper last year because of problems with the two new autogenous mills, but Mr C. A. Macmillan, chairman, is unable to say how much will be lost this year.

But he warns shareholders in his annual statement that between 5,000 to 6,000 tons will be lost during the last two months of this year and early next year when large-scale renovation work takes place.

Mr Macmillan adds: "I cannot foresee any prospect of a meaningful improvement in the company's financial results for 1978."

A Curtiss-Wright proxy statement for its campaign to oust Kennecott's board at the annual meeting is not yet clear for announcing under Securities and Exchange Commission (SEC) rules.

In SEC records related to it, \$77m (about £40.5m) investment in Kennecott, Curtiss-Wright contended that Kennecott should not have bought Carborundum Company late last year.

It has indicated an incoming board would sell off the big abrasives and ceramics-making subsidiary for use by Kennecott, paid \$567m, and then distribute the proceeds to Kennecott holders.

Mining

Corporation, comments that the group is in the last stages of evaluating a potential uranium/gold mine south of the St Helena mine. The implication is clearly that it is the uranium which will make the prospect viable.

But he warns shareholders that if the project goes to production "a very substantial cash investment will be required". Elsewhere there are further references to increasing cash requirements and that the greater part of last year's R14.5m retained earnings have been absorbed by the industrial subsidiaries.

Not surprisingly, perhaps, the directors are seeking to raise the borrowing limits from R240m to R347m.

Kennecott worries

The Kennecott Copper Corporation of America has questioned the Curtiss-Wright Corporation's motives for acquiring recently 9.9 per cent of Kennecott's stock as well as the New York State Attorney General's investigation into the nuclear equipment concern's intentions. It says it wants its promised proxy fight for control of Kennecott.

Kennecott's questions were seen by observers as indicating Kennecott's concern over the coming challenge from Curtiss-Wright. They also betray an anxiousness by Kennecott to get the battle under way.

Wall Street

New York, April 3.—The New York stock market fell sharply today in reaction to the threat of possible credit tightening by the Federal Reserve.

The Dow Jones industrial average fell 6.22 points to 1,319.4. Some 1,079 issues declined with about 450 rising. Volume totalled 28,220,000 shares, up from 26,120,000 shares on Friday.

Speculation spread in Wall Street that the Fed would soon tighten money policy in its drive against inflation and also to support the dollar.

The Fed could raise its discount rate or push higher the target rate on four Federal funds, and some analysts said both moves were probable in the near term.

However, today the Fed indicated the target rate on funds remained the same, and short-term interest rates declined.

Yesterday's Wall Street and Canadian closing prices will appear tomorrow. Later publication is caused by the change to British Summer Time. This will continue until Eastern Daylight Time begins in the United States.

Silver futures collapse

New York, April 3.—SILVER futures prices collapsed today after a sharp rise in the previous session. The price of silver futures fell from 17.50 to 16.50 cents per ounce.

Midland Bank-Report 1977:



"Our performance in 1977 reflects the advantages we are gaining from being a Group which provides a wide range of financial services in an increasing number of world markets."

The Rt. Hon. Lord Armstrong of Sanderstead,
Chairman, Midland Bank Limited.

Pre-tax profit up from £166.4m to £192.8m

After providing for taxation, minority interests and extraordinary items, the net profit attributable to shareholders was £82.5m, as against £71.7m. The improvement in pre-tax profits was achieved in a year of falling interest rates and in a generally depressed economy with only a modest demand for borrowing in the U.K.

Treasury consent to 15% dividend increase

Total dividends for 1977 will amount to 14.75p per share (against 12.62p in 1976) equivalent, with the associated tax credits, to 22.35p per share compared with 19.42p per share for 1976.

Rights issue raises £96.4 million

Continued expansion of the Midland Bank and its subsidiaries creates the need for a further strengthening of the Bank's capital base. The recent £96.4 million rights issue comes after some US \$300 million has been raised in the last two and a half years in the eurocurrency market.

Total advances increase

1977 saw the Midland increase its share of the banking sector's sterling advances, with manufacturing industry, the traditional base of the Bank's business, showing the greatest gain. Industry, however, remained reluctant in 1977 to take up total agreed facilities. The Bank's willingness to provide funds, even at the finest rates, is of little avail without a strong underlying demand in the economy and stable conditions so that customers have the confidence to commit themselves to expansion programmes.

Finance for smaller businesses

A feature of 1977 has been the general recognition of the importance of small businesses to the economy as a whole. The Midland is well placed to assist this sector.

Further expansion overseas

The Bank's International Division has enjoyed a further expansion in foreign currency lending and has consolidated its market share. An important factor in developing this side of the Midland's business has been the additional investment in business abroad and continued

extension of overseas representation. In 1977, offices were opened in Cairo, Madrid and Manila while the Tokyo office is due to be upgraded to a full branch in April 1978.

Specialised finance

Although the overdraft is the traditional form of the Bank's lending, and still remains the most used method of borrowing, constant efforts have been made over the years to adapt services to the changing needs of customers. In particular, there has been a pronounced move from short-term lending to specific medium-term finance and, more recently, to the provision of equity finance.

The Nationalisation Debate

The Bank joined the other London and Scottish banks in sponsoring a publicity campaign designed to increase public awareness that the Labour Party had formally adopted plans to nationalise the largest four clearing banks. During the campaign over 50,000 members of the public accepted the invitation to write in expressing a view on the issue... 90% were opposed to nationalisation.

A loyal worldwide staff

The Group now employs almost 65,000 people around the world and it is through their efforts and skill that we have earned a reputation which we believe to be second to none.

1977 Group Results in Brief

	£000's
Profit before taxation	192,830
Taxation	104,915
Attributable profit (after extraordinary items and minority interests)	82,470
Shareholders' dividends	20,066
Retained profit	62,404

If you would like a copy of Lord Armstrong's full Statement and the Report for 1977, please write to: The Secretary, Midland Bank Limited, Head Office, 27 Poultry, London EC2P 2BA.



Midland Bank Group

Offshore

WELLS
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More ye go

Stock Exchange Prices

Speculative features

ACCOUNT DAYS: Dealings began, April 3. Dealings end, April 14. Contingency Day, April 17. Settlement Day, April 25.
Forward bargains are permitted on two previous days

Handwritten signature: *John Smith*

City Offices

Hampton & Sons

01-236 7831

STOCKS									
Code	Company	Price	Change	Code	Company	Price	Change	Code	Company
100	100	100		200	200	200		300	300
400	400	400		500	500	500		600	600
700	700	700		800	800	800		900	900
1100	1100	1100		1200	1200	1200		1300	1300
1400	1400	1400		1500	1500	1500		1600	1600
1700	1700	1700		1800	1800	1800		1900	1900
2100	2100	2100		2200	2200	2200		2300	2300
2400	2400	2400		2500	2500	2500		2600	2600
2700	2700	2700		2800	2800	2800		2900	2900
3100	3100	3100		3200	3200	3200		3300	3300
3400	3400	3400		3500	3500	3500		3600	3600
3700	3700	3700		3800	3800	3800		3900	3900
4100	4100	4100		4200	4200	4200		4300	4300
4400	4400	4400		4500	4500	4500		4600	4600
4700	4700	4700		4800	4800	4800		4900	4900
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5400	5400	5400		5500	5500	5500		5600	5600
5700	5700	5700		5800	5800	5800		5900	5900
6100	6100	6100		6200	6200	6200		6300	6300
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7100	7100	7100		7200	7200	7200		7300	7300
7400	7400	7400		7500	7500	7500		7600	7600
7700	7700	7700		7800	7800	7800		7900	7900
8100	8100	8100		8200	8200	8200		8300	8300
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8700	8700	8700		8800	8800	8800		8900	8900
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9400	9400	9400		9500	9500	9500		9600	9600
9700	9700	9700		9800	9800	9800		9900	9900
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12700	12700	12700		12800	12800	12800		12900	12900
13100	13100	13100		13200	13200	13200		13300	13300
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16100	16100	16100		16200	16200	16200		16300	16300
16400	16400	16400		16500	16500	16500		16600	16600
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22700	22700	22700		22800	22800	22800		22900	22900
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29700	29700	29700		29800	29800	29800		29900	29900
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30400	30400	30400		30500	30500	30500		30600	30600
30700	30700	30700		30800	30800	300			

General Vacancies

ACQUISITIONS EDITOR

In order to sustain our rapid growth we wish to appoint an experienced Acquisitions Editor to develop our publishing programme for professional markets.

The successful candidate will be asked to build a list of new publications for the tax, finance and accountancy communities and for other professional groups.

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Please apply in confidence to Oliver Freeman, Director, Oliver Freeman Ltd., Norwich House, 11-13 Norwich Street, London EC4A 1AB. Telephone 01-404 5721.

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A well-known City Investment Trust requires a newly qualified Accountant to join their Accounts Department dealing with portfolio investments, taxation and property investments, etc. The successful applicant will be aged between 23-30 and will respond directly to the Group Accountant, in whose absence he would be expected to deputise in addition to the salary there is a Non-Contributory Pension and Life Assurance Scheme; assistance on Mortgage Finance, Free BUPA cover and Top Up lunch vouchers per day. Hours: 9.30 a.m. to 5.30 p.m. Holidays: 4 weeks. Please apply in writing in strictest confidence to:—

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£6,500+

Major Clearing Bank requires a Personnel Manager/ess for its Computer Centre. Applicants should be aged between 35 and 45 and have some experience in personnel work, preferably in the computer industry. Minimum salary £6,500 (plus supplements) together with the usual fringe benefits associated with the banking industry. Applications together with full c.v. to

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GRADUATE MARKETING OPPORTUNITIES

This first class training scheme will assure you of a very worthwhile future. An opportunity for the career seeker, keen to improve their capabilities and management potential. Drive, determination and ambition are the ideal qualities sought. This major international company can offer scope and variety to someone educated to graduate level with an interesting commercial background in administration, finance or computers. Commencing salary £3,000 to £5,000. Age 21-28.

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required by a large retail organisation to undertake interesting merchandise surveys mainly in Central London. The work entails the identification of a critical retail and the ability to identify and select relevant goods. These goods are then to be compared with the goods in the comparison shop. Applicants should have a good knowledge of retailing, good communication skills and be able to work on a flexible basis. Salary £3,500 p.a. plus expenses. Monday to Friday 9.30 a.m. to 5.30 p.m. Excellent start benefits. Please apply to: 01-499 2347 for an application form.

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Study for your final 'A' level in the full-time course. This is a full-time course in the evening. It is a well-known course and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

VERY GOOD OPPORTUNITY

Manager requires ambitious person to manage a large and growing business. The successful candidate will be responsible for the management and financial control of the business. The business is a well-known company and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

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JOBS IN THE ALPS

Boys and girls 18 plus for work in hotels in famous Alpine resorts. Knowledge of French and/or German essential. Very hard work, good pay and conditions. Write to: Mrs. J. EATON, PLACE, LONDON, S.W.1.

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needed for position in City of London. The successful candidate will be responsible for the management and financial control of the business. The business is a well-known company and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

NALGO Admin Assistant £1780

A subsidiary of one of the City's most respected firms is looking for men and women of good commercial background to join a small sales team in Central London. Specialising in investment and pensions. First year salary can exceed £10,000. Ring Mrs. J. EATON, PLACE, LONDON, S.W.1.

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with living for 1/2 months work. £36 p.w. just the job. EMP. OFFICE. MANAGER/ESS. See Non-Secretarial.

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To see through a wide range of primary and secondary school books from manuscript to publication. Duties will include copy editing, layout, picture research, liaison with authors and design, production, publicity, sales dept, etc. A minimum of 2 years' sub-editorial experience is essential. Apply in writing to:

Anne-Marie Swales, Editor U.K. Educational Books, Evans Brothers, Montague House, Russell Square, London WC1B 5EE.

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required for established family home grown timber business situated in North East of England. There will be direct involvement with sales, production and transport. Must have a good all round education. Country cottage, good salary and conditions available to the successful applicant.

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We are seeking to expand our team of Brokers dealing in LPG/LNG. It is not necessary to be fully conversant with gas and broking but a good grounding in one or the other is desirable. The successful applicant will have to be prepared to travel on occasions and be capable of representing the company at all levels of contact. Preferred age group about 25-35. Salary negotiable. Write—Gas Broker, 52 Bishopsgate, London, E.C.2.

ASSISTANT COMMERCIAL MANAGER STAINES

LOOKING FOR CHALLENGE AND INVOLVEMENT. This is a progressive and rapidly expanding market leader in the design and manufacture of a wide range of personal equipment. With an increasing customer base, both at home and abroad, we are now looking for a talented and motivated person to be responsible for the design and production of sales contracts. You will be involved in the design and production of sales contracts, as well as in the design and production of sales contracts. The successful candidate will have to be prepared to travel on occasions and be capable of representing the company at all levels of contact. Preferred age group about 25-35. Salary negotiable. Write—Gas Broker, 52 Bishopsgate, London, E.C.2.

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UNIVERSITY COLLEGE-BOTSWANA

Applications are invited for the following posts in the Faculty of Education:—

1. PROFESSOR IN DEPARTMENT OF LANGUAGES AND SOCIAL SCIENCE: EDUCATION. Applicants should have a Doctorate in Education and have extensive experience in teacher education and educational research, and University teaching experience in several of the following subjects: English, History, Geography, Development Studies (Economics and Civics) and Science.

2. LECTURER IN SOCIOLOGY OF EDUCATION. Applicants should have a degree in Sociology and have some experience in teacher education, preferably in a developing country.

3. LECTURER IN EDUCATIONAL PSYCHOLOGY. Applicants should have a degree in Psychology and have some experience in teacher education, preferably in a developing country.

4. LECTURER IN EDUCATIONAL FOUNDATIONS. Applicants should have a degree in Education and have some experience in teacher education, preferably in a developing country.

5. LECTURER IN EDUCATIONAL RESOURCES AND COMMUNICATION. Applicants should have a degree in Education and have some experience in teacher education, preferably in a developing country.

Salary scales: Professor P.1-P.7, £5,500 p.a.; Lecturer P.1-P.7, £3,500 p.a. Applications should be sent to the Registrar, University College Botswana, P.O. Box 100, Gaborone, Botswana. Closing date 15 April 1978.

Further particulars and forms of application are obtainable from:—

The Secretary and Treasurer, UNIVERSITY COLLEGE OF ART, Lauriston Place, Edinburgh EH3 9DF.

The closing date for applications is Friday, 7th April, 1978.

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The Secretary and Treasurer, UNIVERSITY COLLEGE OF ART, Lauriston Place, Edinburgh EH3 9DF.

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THALIDOMIDE CHILDREN'S TRUST

Applications are invited for the post of

SENIOR SOCIAL WORKER

The Senior Social Worker will be required to travel extensively throughout the United Kingdom visiting the homes of the Trust's beneficiaries (aged 15-19) and to liaise with Local Authorities on related matters. He or she would also be required to arrange and co-ordinate social work visits by other social workers as part of the Trust's overall Welfare Service. Applicants must hold a professional social work qualification with at least 10 years' practical experience within the Social Services, particularly in relation to the physically handicapped and have demonstrated management ability. Salary according to qualifications and experience in the region of £5,000. Assistance with removal expenses and a car provided. Further information may be obtained from the Director, Thalidomide Children's Trust, The Strawberry, Church Street, St. Neots, Huntingdon, Cambs, PE19 2BU. Telephone: Huntingdon 74074 (STD Code 0480).

THE CITY UNIVERSITY

Department of Social Science & Humanities

TWO LECTURESHIPS IN ECONOMICS

Applications are invited for two posts in Economics beginning October 1, 1978. For one of them preference will be given to candidates able to participate in teaching economic theory treated mathematically. For the other ability to teach macroeconomics is expected and an interest in applied macroeconomics an advantage. Salary on scale £3,555-£6,655 per annum (under review) plus £450 London Allowance. Further particulars and application forms can be obtained from the Deputy Academic Registrar, The City University, St. John Street, London, EC1Y 4BP (Tel. 01-253 4399 extension 336), to whom applications should be sent by April 17th, 1978. Please quote reference 885/200/1.

UNITED WORLD COLLEGE OF SOUTH EAST ASIA, SINGAPORE

Economics Teacher

The college invites applications from teachers of all nationalities for the post of ASSISTANT TEACHER OF ECONOMICS to teach at the college. The successful candidate will be responsible for the teaching of Economics at the college. The college is a well-known institution and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

UNIVERSITY APPOINTMENTS

University of Ife—Nigeria

Applications are invited for the post of PROFESSOR, READER AND SENIOR LECTURER in the Department of ACCOUNTING. Applicants must have a degree in Accounting and have extensive experience in teaching and research in the field of Accounting. The successful candidate will be responsible for the teaching and research in the field of Accounting. The college is a well-known institution and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

LEGAL APPOINTMENT

Prosecute for Sussex Police

Applications are invited from suitably experienced Solicitors for the following posts:— Principal Prosecuting Solicitor £7,584.50, Senior Prosecuting Solicitor £7,084.50, Prosecuting Solicitor £6,577.50, Assistant Prosecuting Solicitor £5,208.50. The Authority offers the following benefits:— Relocation grant scheme, Car loans. Full details from Pat Weller, telephone Law extension 563, or write to the Solicitor and Clerk of the Sussex Police Authority, Pelham St. Andrew's Lane, Lewes, East Sussex, BN7 1YU.

BBC COPYRIGHT DEPARTMENT

SENIOR COPYRIGHT ASSISTANT

with legal background. To assist Head of Copyright with various aspects of the work. The successful candidate will be responsible for the management and financial control of the business. The business is a well-known company and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

PROGRAMME CONTRACTS DEPARTMENT

SOLICITOR

To work as Legal Assistant on a wide range of copyright matters relating to the management of the BBC's copyright. The successful candidate will be responsible for the management and financial control of the business. The business is a well-known company and a good chance to extend your experience and to gain a qualification which will be of great value to you. Please apply to: 01-499 2347 for an application form.

University of Exeter

DEPARTMENT OF GEOGRAPHY

Applications are invited for the post of TWO LECTURER POSITS in the Department of Geography. The successful candidate will be responsible for the teaching and research in the field of Geography. The college is a well-known institution and a good chance to extend your experience and to gain a qualification which will be of great value to you



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